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THE NATURE OF CONDUCT

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THE NATURE OF CONDUCT

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BY

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SECONDARY EDUCATION"

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TO MY MOTHER

PREFACE

Civilization, as it emerges into fuller awareness of its own condition and progress, is at last realizing that human conduct is a product of natural forces in much the same way as is the rest of the physical world, which is being so effectively understood and controlled. Moreover, the truth is becoming apparent that no form of control has a greater possibility for influencing the happiness and well-being of society than the control of those biological reactions which we classify under the head of human conduct. In the control of the physical environment there are two persons at work: the scientist, who discovers laws; and the engineer, who applies the discoveries of the scientist to the actual manipulation of materials. So, in the realm of conduct, we have the psychologist, who studies the factors which influence behavior, and the educator, who uses these discoveries in actually molding the conduct of growing boys and girls. This book is designed to be of value to both of these persons: it offers a new viewpoint and a correlation of facts to the student of psychology, and it describes conduct as a guide for the educator in understanding more clearly the exact nature of the process it is his province to control.

In recent years the problem of character formation has loomed large in importance in educational discussions and practices. For one thing society has become dissatisfied with the blind following of custom and with the traditional attempts of religion to control conduct. Along with the spirit of investigation into the workings of all human institutions has come a distrust as to the validity of our *mores* and the methods used in forming conduct. We have become suspicious of a system that fosters war, slavery, persecution, and intolerance, and are anxious to see this whole question of human conduct brought out into the open.

With the lessening of the influence of the home in the control of conduct, the school has become aware that one of its most important functions is to shoulder the burden of character development. The nursery-school movement has conceived as its primary objective the formation of early conduct trends. Habit clinics have grown up in our large cities to advise concerning troublesome problems of conduct. Extracurricular activities in high school have proved to be the natural environment for the development of modes of social behavior. Even religious education has redefined for itself its function in the guidance of conduct, and, in discarding older methods, has been casting about in an effort to make a more direct attack on the problems of conduct control. In fact, on all sides today we hear discussed the large question of character education.

These movements toward a more rational solution of the problem of conduct guidance have been hampered by a confusion as to the real outcomes that are being sought. Part of this is due to the restrictions of the traditional belief that character is a mysterious entity within the individual, which needs only cultivation to make it blossom forth. To this end exhortations have been uttered by preachers in the pulpit and teachers in the classroom. It is my first purpose in this book to dispel any element of mystery in attempting to define conduct by starting with the basic conceptions of physiology and psychology. By studying all possible combinations of stimulus and response and the relation of these combinations to conduct, one is led inevitably to the conclusion that, after all, this elusive ideal, character, is really the organization of large numbers of habits. Such a conclusion removes the suspicion of sentimentality from character education and makes it instead a problem for scientific educational engineering.

This book is addressed to important groups of such engineers — teachers, parents, social workers, and all who are interested in the problems of conduct formation and who wish to learn what modern psychology conceives to be the nature of conduct. Students of psychology will also find herein a new orientation of their material and novel applications to the applied problems of social control.

The writer is grateful to Clark University for permission to quote from his own article, "Personal Habits," which appeared in *Pedagogical Seminary*, June, 1924; to Doubleday, Doran and Company for permission to quote from his "Conduct Codes," which appeared in *Educational Review*, June, 1924; and to The Palmer Company for permission to quote from his "Health Habits, Related Knowledge, and Problems of Health," which appeared in *Education*, January and February, 1924.

PERCIVAL M. SYMONDS.

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THE NATURE OF CONDUCT

CHAPTER I

INTRODUCTION

The need for a psychological definition of conduct — Definition of conduct — Classification of conduct — Relationships among various phases of conduct — Behavior and conduct compared — The social nature of conduct — Conduct as a fact and conduct as a norm — Only observable features of behavior considered — Avoidance of the term purpose — Avoidance of the term consciousness — Summary.

The need for a psychological definition of conduct. — The purpose of this book is to define, classify, and show relationships of conduct in terms of modern psychology. Conduct is the subject matter of the field of ethics and has often received analyses at the hands of moralists. In what follows, however, we shall always be considering it from the points of view of education and psychology; for education has as one of its major aims the guidance, control, and correction of conduct. In achieving this end, educators often shoot wide of the mark because they fail to define conduct accurately. They do not know exactly what they are trying to achieve. Educators are talking today about the objectives of education and are analyzing the aims of education into skills, habits, attitudes, ideals, abilities, appreciations, and the like without a clear conception of just what an attitude or an ideal or an appreciation is.

It is all very well to say that one objective of education is to build the attitude of tolerance toward the beliefs of others, but it is difficult to define this attitude so precisely in terms of conduct or in terms of the psychological mechanisms involved that the teacher knows exactly how to create it. As a matter of fact, in the case of most of these educational objectives, teachers know only in a dim way that as the result of a year's work, after they have used many appeals and many different devices and materials, some of the children acquire the desired skill or attitude or appreciation and others do not. Probably the only way we shall ever find out the answer to the teacher's problems is by extended experimentation. But a careful analysis, such as that presented in this book, should provide clues which will obviate the necessity for much useless experimentation.

Even where the objectives are definite, teachers often direct activity in the wrong channels to gain some well-defined end, because they have failed to analyze this end in terms of its elements in conduct. For example, we hear much today about forming habits of studiousness, and yet we are not sure that we have analyzed studiousness correctly into its separate constituent habits. Deich and Jones made an investigation of the study habits of 316 distinguished high-school pupils. They found that of these 316 pupils, 155 had no definite time for study; while Whipple, in his book *How to Study Effectively*, says, "Form a time-study habit." One hundred forty-four did not underscore important points in texts although Whipple says, "Don't hesitate to mark up your own books to make the essential ideas stand out visibly." Two hundred thirty-one usually studied the entire lesson at one sitting, but Whipple says, "Distribute over more than one period the time given to a specified learning."[1] It is plain that either some of the deductions from general psychological principles are wrong, or these pupils achieved superiority in spite of bad habits.

Definition of conduct. — In the succeeding chapters there will be an attempt to define and describe — that is, to make explicit what is only vague, indefinite, or confused. Often a definition is a purely logical affair, a setting of limits to a word or concept, a marking off of boundaries. That will in part be our task. We shall try to mark off and make clear the boundaries of a term. This will require an analysis. For instance, what is an attitude? Attitude is used by educators and psychologists in at least seven separate and distinct senses. Which meaning shall we adopt? To reach a decision we shall analyze various phases of attitude and arrive at a delimited definition of the term. Personality and character are often used interchangeably. Can we make vital distinctions between them?

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[1] WHIPPLE, G. M.: *How to Study Effectively*, p. 39. Public School Publishing Company, 1916.

Classification of conduct. — Definition of this sort inevitably becomes organized into classification, so part of our task will of necessity be to set up a rough classification of conduct. Many such classifications have been made, all more or less faulty because perfect analysis is not possible. Thus, here also, we shall not attain the perfect classification of some phases of conduct because of the imperfection of our knowledge about them. But we shall try to incorporate the results of such reputable investigations as are available at the present time. The perfection of classification is a token of the growth of science; the success of our ability to classify conduct in its various aspects is an indication of how close we are to a true science of character education. And as far as our classification is a natural one, it will so order thought as to make future investigation follow more profitable lines.

Relationships among various phases of conduct. — A third aim of this book is to show the relationships of conduct in its various phases to one another and to other psychological entities. For instance, what is the relation of ideas to overt conduct? Do ideas have control over overt conduct? (This is the problem of ideo-motor activity.) What is the relation between emotion and overt conduct? All these questions show that a large part of the determination of the nature of conduct is the demonstration of the relationships among parts of the psychological process.

Behavior and conduct compared. — The term conduct as used in this book is narrower than the term behavior as commonly used by psychologists. Behavior, technically, refers to every separate reaction made in response to any stimulus to which the organism is sensitive. In this sense it includes the growth of plants in response to light, heat, moisture, and chemicals. Behavior in animals refers not only to somatic changes but also to minute organic changes, whether in viscera, glands, blood vessels, or elsewhere, which in the more highly organized animals are controlled by the central nervous system. Conduct does not refer to these separate changes. We take *conduct* to mean that *overt behavior of a human being which involves an issue respecting himself, that issue making a difference in his satisfaction with life.* Man as an animal coördinates his movements under normal conditions. The various parts of the bodily mechanism coöperate. Conduct does not refer to the reactions of the separate organs but to the movement as a whole. Every reaction is *about* something, and conduct considers the total set of reactions of the organism. If at times the discussion seems to refer to specific behavior, that is because certain reactions seem to loom large in importance in conduct as the focal points for education. But the discussion must always keep in mind that this focal reaction is supported by or is serving other reactions. Overt habits (learned behavior) make up the bulk of habit. Brushing the teeth is an active habit of conduct. Although in this habit we are usually concerned with handling the brush, incidents of time and place, and reactions to other people, it is never forgotten that the organism as a whole is working. Oftentimes, aberrations of conduct are explained by reference not to the outward activity itself but to the concomitant reactions of the rest of the organism. Sleeping with the windows open at night is a passive habit of conduct. *Singular* movements, such as turning the corner at the next street, even though they may lead to great fortune or calamity, are so unimportant a part of conduct as to be practically neglected. That is, behavior must be a more or less permanent disposition or habitual way of doing things before we notice it as conduct. To be sure, spasmodic or incidental behavior would have to be explained psychologically, and habit plays its part, but this type of behavior has little educational significance. Separate visceral or glandular changes will not be classed as conduct, although such changes are factors in its determination.

The social nature of conduct. — Then, too, conduct is considered here with reference not only to the satisfaction of the person whose conduct it is, but also to the satisfactions of other persons as determined by that conduct. Much human activity is classed as conduct because the satisfactions are in the person involved. For example, eating a hearty and well-prepared meal gives immediate satisfaction, and eating food with vitamin content regularly leads to more distant satisfaction in the person involved. But whether or not we drink our soup quietly or use our handkerchief to protect a sneeze is also a matter of conduct because it affects the satisfactions of other people. Many reactions which are fairly neutral as regards satisfaction of the individual involved become conduct because of their effect on others. Failure to nod to a friend on the street may be accidental on our part but may have a profound effect on the friend.

Conduct as a fact and conduct as a norm. — Just what we mean by conduct will be clearer if it is understood that the conduct of which we speak is not always conduct or behavior as observed, as it exists, as it is, but conduct which should be. We are continually referring our point of view to education. Conduct in this book is thought of as an objective of education. Education is never interested in things as they are, but rather as they would be if society were to become what sagacious men have planned and hoped for it. This clearly separates conduct from behavior as technically used in psychology. J. B. Watson says, "The behaviorist is interested in integrations and total activities of the individual."[1] He is trying to show that behavioristic psychology is interested not only in physiological elements of behavior, such as glandular and muscular reactions, but in the total, integrated behavior. The scientist never sets goals, norms, standards, or objectives — he takes things as he finds them. The educator, being not only a scientist but an artist and technician, perforce must set up standards. So the conduct described here is the finished product of education. The most fundamental basis for the determination of standards is the satisfactions of life, both those resulting from immediate fulfillment of bodily desires, and those derived, longer-time satisfactions which fill so large a place in everyday living.

We propose therefore to define and describe conduct in terms of modern psychology. Since modern psychology has many variations, we should be explicit as to our underlying psychological assumptions. Of these there are three sufficiently important to require elucidation.

Only observable features of behavior considered. — Psychology today claims to be a science. In so doing it purports to use the methods of other, more established sciences, to take a place in the hierarchy of sciences, and to draw on materials in sciences lower in the hierarchy. Particularly does psychology draw on physiology. Modern psychology does not postulate a new element, a new substance — the mind stuff — but considers the nervous system as the mechanism of behavior. There is no quarrel with the psycho-physical parallelists, because the psychical is not regarded mystically. Psychology accepts the findings of physiology and starts studying behavior where physiology leaves off. Objective observation shows us responses following stimuli, some regularly and uniformly as in the reflexes, some less consistently. And experiment teaches us that the bond connecting these two peripheral phenomena is the nervous system. Some day, perhaps, we shall be able to refer behavior effect to specific changes in the nervous system. Today our knowledge does not extend that far. But it is extremely difficult to understand how behavior can ever be studied in the living animal as normal behavior except through a description of behavior itself. The task of psychology will always be the direct observation of behavior under various external controls. And since psychology is satisfied with a description of stimulus and response, it will hypothecate no inner force except that released by the nervous system as a response to stimulation.

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[1] WATSON, J. B.: *Psychology from the Standpoint of a Behaviorist*, p. 40. J. B. Lippincott Company, 1919.

Psychologists should be extremely careful that psychological terminology refer only to observable features in behavior. No scientist should ever allow language to confuse and cover up distinctions and, thus, to create by a word what does not have a real existence. Psychology, having as its subject matter the behavior of men and women, has been particularly unfortunate in that it has had thrust upon it a vocabulary of everyday impressions. Astronomy long ago threw off the bondage of "the sunset" and reconstructed for itself the Copernican system with a new terminology. Psychology has only recently flung off the "will," the "imagination," the "reason," and the "memory." Present-day trait psychology is wallowing in a terminology that is no whit less censurable. We have given a corporate existence to many traits by the word, "trait," that is sure to go the way of the "faculties." Just as formerly a single sagacious act led one to expatiate upon the "reason," or a single act of determination, upon the "will," so, even today, experimenters will make the most ludicrous claims concerning traits from the results of narrow and specialized experiment. Consider, for example, the following deductions as the result of giving some simple psychological tests: adaptability is measured by a test of ability to form words from mixed letters; guessing ability is measured by verbal-completion tests; analytical ability is measured by number-completion tests; vocabulary is measured by a word-building test;

memory span is measured by auditory memory span for digits. In each case a specific performance is made to stand for a much wider and more inclusive (and indefinite) trait.

It is clear, then, that psychology must constantly guard itself against a nominalism which attempts to create by naming. Gradually, through careful, controlled observation, there is being developed a terminology which more nearly accords with facts. Stimuli are named. Responses are named. The parts of the body involved are named. Separate habits of whatever sort are named. Generalizations are carefully scrutinized and where general terms are used they are more often than not terms of activity rather than of state. Memory is being replaced by memorizing, retaining, recall, and recognition. Fatigue is being replaced by work and efficiency.

Avoidance of the term purpose. — Modern psychology is particularly concerned with avoiding the terminology of purpose and consciousness, not because purpose and consciousness are unrealities, but because they imply a point of view which does not yield to the scientific approach or is fruitless for control. There is no need to deny purpose. It exists and is a most powerful force. But the psychology which admits purpose as an explanation is a beaten science. It admits failure. It proposes to adopt an unanalyzable concept because it is too lazy to adopt the slow and painstaking experimentation necessary to make the analysis. When psychology falls back on purpose as an explanation of behavior, it stops advance. It says that we have reached the ultimate. Modern psychology holds a different hypothesis. Purpose must fall into line with other behavior phenomena. At present the most hopeful clues are that purpose involves the phenomena of delayed reaction, and that purpose is a conditioned reaction, the stimuli including the great organic processes such as hunger, sex, and other organic, muscular, and glandular processes. This is now little more than a hypothesis, but it has the advantage of stimulating experiment and thought, whereas the concept of purpose deadens scientific activity. Purpose as a psychological concept is also useless as a control of conduct. Since purpose resides within the man, we are not told how to form or stimulate it. But a concept of conditioned response, to use one hypothesis of modern psychology, leads immediately to a method of control. Such a concept provides education with a technique.

Avoidance of the term consciousness. — Likewise, reference to consciousness is to be avoided in our analysis, not because consciousness does not exist but because it defies analysis and offers little for education. Consciousness is another ultimate. It leads no further, whereas science is always adopting points of view which offer opportunity for analysis. We shall meet consciousness when we study the relation between conduct and ideas. Today, ideas are thought of in two ways by modern psychology. The extreme behaviorist (J. B. Watson, for example) maintains that ideas are in reality subvocal, implicit verbal responses. Trains of ideas, then, are these implicit verbal responses which act as stimuli through kinaesthetic nerve endings for the subsequent verbal responses. Besides verbal response, there may be other implicit bodily reactions which act as substitutes for more open or expressed reactions. Yet these implicit responses have not been experimentally observed and still remain hypothetical. Other psychologists, also behaviorists, who do not invoke the terminology of consciousness in explaining the train of ideas, hypothecate a much longer interval between stimulus and response when the association tracts of the cerebrum (and even lower centers) are busily engaged in transmitting nerve currents. But whether we make the thing a muscular or a nervous process, modern psychology makes it a bodily process. At any rate, it does not fall back on consciousness. Consciousness has given us the method of introspection, probably the easiest of all methods for the investigation of internal processes, although it is singularly inapplicable for verification. A form of observation which cannot be verified is discarded by scientists in general; hence introspection as a reliable means of observation is generally discarded by scientific psychologists. Lastly, consciousness gives no clue to behavior control. Consciousness is an internal thing — how it is created, how it issues into action, we are not told. Therefore, insofar as psychology is interested in behavior control, it abandons the terminology and concepts of consciousness and adopts the stimulus-response terminology.

Summary. — The purpose of this book is to describe conduct in terms of modern psychology. This will involve setting definitions, making classifications, and showing relationships. Conduct is distinguished from behavior as something that involves the whole individual. The conduct described in this book also refers to the more or less permanent dispositions and does not give much consideration to temporary and singular movements. Conduct has reference not only to the satisfaction of the individual whose activity it is, but to satisfaction of other individuals affected. Modern psychology, in whose terms the descriptions will be couched, is restricted to that psychology which uses canons and methods similar to those observed by better-grounded sciences. It uses only the observable features of behavior and discards the points of view of purpose or consciousness in its descriptions.

CHAPTER II

BIOLOGICAL AND PHYSIOLOGICAL BASIS OF CONDUCT

The body as a machine — Body systems and the function of conduct — The nervous system — Architecture of the nervous system—Autonomic system—The neurone — Physiology of conduction—Physiology of conduction over the synapse—Summary.

The body as a machine. — A drug store recently displayed a chart in which the organs of the body were portrayed as parts of a machine. The mouth was the crushing and moistening chamber in which raw material was prepared for the stomach. In the stomach strong chemicals worked on this material, which was then sent on to the intestines, where the walls absorbed certain products while other products were passed on to the waste chambers. The heart was a pump with pistons and valves which sent the blood through the arteries and received it back through the veins. The lungs were the apparatus for purifying the blood, and busy workers were passing oxygen to the blood and extracting and carrying away the carbon dioxide. Up in the brain sat the telephone operator, who relayed messages from different parts of the system and from the outer world to the muscles and glands through an intricate set of wires.

In order to understand the nature of conduct, it is helpful to think of the body as a machine. To be sure, the machine which was pictured in the chart was unlike other machines in that it seemed to have no function or purpose. Most machines manufacture some product or provide power for some other machine or are used for locomotion. The human machine is capable of locomotion, of making things, of supplying power, in fact of doing most of the things that machines are expected to do. Yet it is in the service of no one except itself, and most if not all of its activities are directed toward keeping its own machinery running. This is a characteristic of all living organisms. To the casual observer no organism seems to have any function except to keep itself alive during its life span and to perpetuate its kind. But to the individual these functions of keeping alive and of perpetuating the species provide the purpose and motive, the joy and happiness of life. These necessary activities eventuate in work and play, in school and business, in home and nation. It is perhaps an imperfect generalization to say that all conduct is in the service of the organic requirements of the body. It is true that providing a man with every necessity of life is the surest way of giving him *ennui* and boredom. But the child who has every requirement provided does not lapse into lassitude. He finds outlets in play and games, in the physical activity of running, jumping, and climbing, in competition, in search of praise and avoidance of censure, none of which seem to be connected with supplying his immediate organic needs. It is a far cry to say that these are derivatives, learned early in life, of genuine organic needs, or are instincts which have been selected through the ages because they have eventuated in preservation and perpetuation of the race. These assumptions make fascinating hypotheses, but science cannot at present prove or disprove them.

Body systems and the function of conduct.— Physiologists divide the body into nine systems: the *skeletal*, the *reproductive*, the *digestive*, the *circulatory*, the *respiratory*, the *excretory*, the *muscular*, the *endocrine*, and the *nervous*, each with numerous subdivisions. The framework of the body is the skeletal system. The reproductive system is essential for the perpetuation of the species, and its functioning is dependent on external contact. The digestive system receives food, the raw material of the body energy, and resolves it chemically into forms which can be utilized by the body. The circulatory system distributes these transformed foodstuffs to all parts of the body as needed, together with oxygen, by means of which the foodstuffs are transformed into energy; and carries away the burned products which are the results of activity. The respiratory system supplies the oxygen in the blood and carries away the carbon dioxide from the blood. The muscular system utilizes the foodstuffs and oxygen, both to carry on the movements necessary in the organic processes of the digestive, circulatory, and excretory systems, and to move the skeletal system through space. The glandular system provides hormones, which facilitate the chemical action of the digestive, reproductive, and muscular systems and which govern the growth of the bones. Lastly, the nervous system provides the connecting links, by means of which the muscular system is made to respond to various forms of energy in the outside world and to parts of the body, and the different systems of the body are made to respond to one another in rhythmic and coördinated fashion. Of these systems, the reproductive, the digestive, and the respiratory demand contact or supplies from the outside. The respiratory needs air, but since air is an all-pervading substance and can be had freely, the organism is put to no inconvenience to supply itself with air except in those rare cases when it is scarce. Hence food and sexual contact are the two great needs of the body. Much, if not all, of the body's activity is either for the direct purpose of supplying these two requirements or is a learned or inherited derivative of these requirements. In other words, the body is a machine whose energy is expended largely in seeking the necessary requirements for keeping the machine running. Conduct, then, in its simplest terms, is the modes of activity which our body learns for keeping itself in running order in the complex situations of modern life in which it finds itself.

Psychologists and educators have been prone to neglect the fact that conduct is largely in the service of the organic functions of the body, and that conduct must constantly be sensitive to the organic needs, else maladaptation occurs. Much of the abnormality of conduct is due to the fact that the individual has neglected or found it impossible to satisfy his bodily needs or some derivative of them.

The nervous system. — The nervous system is of especial interest to the student of conduct because it is this system which connects man with the outside world and is the agent which stimulates the muscular and glandular systems. Suppose that man is in need of food. Food does not come to him; he must go out and get it. He must know in what direction to go, he must be able to coördinate his movements to traverse the distance, he must recognize the food when he is near it, and he must be able to capture it and bring it to his mouth. All this means that man must be sensitive to objects in his environment and must be able to guide and control his body so as to orient himself with respect to those objects and to handle and control them. The mechanism by which this connection is made between objects in the outside world and our own muscular system is the nervous system.

Neurones. — The nervous system is made up of elongated cells like threads or fibers, called *neurones*, some of which traverse long distances in the body and serve as the connecting links between the sources of energy on the sensory side and the muscles on the responding side. In no case, however, does the neurone make a direct, unbroken path from sense organ to muscle. Neurones are joined in relays. *This simple fact is the basis for all choice and learning.*

Neurones are of three types, differing according to function. *Afferent* neurones carry impulses from the sense organs or sensory endings to the central nervous system. Within the central nervous system are *correlation* neurones, which transfer the impulse from one center to another. This impulse is finally picked up and carried out by *efferent* neurones until it comes in contact with a muscle (or gland) and is passed over as a stimulus to the muscle. The afferent and efferent neurones extend for the most part in bundles called nerves, which are like cables composed of strands.

Architecture of the nervous system. — The *central nervous system*, which is the correlation or redistribution center of nerve impulses, consists of the *spinal cord* and the *brain*. The spinal cord is enclosed within the spine, and the brain within the skull. There is no sharp distinction between the brain and spinal cord — one passes gradually into the other. The brain and spinal cord consist of two kinds of regions; one, the *tracts*, which are pathways for groups of neurones ascending or descending; and the other, the *nuclei*, which are regions where neurones end and are joined by other neurones. The central nervous system seems to be built in layers, thus showing the influence of evolution. The spinal cord represents the lowest layer; the cerebrum the highest. Each higher layer represents more complex functions. The nuclei in the spinal cord are the centers for the body reflexes, the simplest, most direct and automatic reactions in the body. These spinal reflexes operate as relays, possibly at times of two neurones, but typically of three or more. An example of this very simple type of reaction is a dog scratching at an irritation of the skin. When the skin is tickled an afferent neurone carries an impulse to the spinal cord. There the impulse passes over to an efferent neurone which stimulates the muscle of the leg to produce the scratching movement. Probably in even so simple a reflex, thousands of neurones are in operation and thousands of impulses are transmitted. Probably, also, there are intercalary or relay neurones between the afferent and efferent neurones which distribute the impulse for a short distance up or down the spinal cord.

The spinal cord. — It is difficult to discuss the function of the spinal cord apart from the higher levels of the central nervous system. Certain reflexes have their seat in the spinal cord, but they seldom work alone and are usually under control by the higher centers. Such a reflex is the patellar reflex or knee jerk, which probably is a spinal reflex. The spinal cord also aids in the tonic control of the limbs and trunk. But the major function of the spinal cord seems to be to dispatch impulses received by the trunk and limbs to the brain, to transmit motor impulses from the brain to the trunk and limbs, and to blend and integrate these impulses. Both the ascending and descending impulses travel in an orderly manner in well-defined tracts or pathways in the spinal cord.

Medulla oblongata. — The spinal cord merges into the brain in a section known as the *medulla oblongata.* The cross section of the medulla oblongata is greater than that of the spinal cord, and the nuclei of neurone endings are greater in volume and more numerous (indicated by lumps or swellings), showing that this part of the brain stem is shouldering additional functions. The medulla oblongata contains centers for control of respiration, heart action, and gastro-intestinal activity; also of the pharynx, tongue, muscles of the face, and *synergic* control of the eye and head movements together. In this region are received sensory impressions from the heart, the gastro-intestinal mucosa, the pharynx, larynx, and tongue, as well as from the sense of taste. Important centers in the medulla have to do with the maintenance of the balance or equilibrium of the body. In the medulla are centers for the reflexes of coughing, swallowing, vomiting, salivation, sneezing, and sucking. The primary centers for the control of the voice are in the medulla. It is also believed that control over bodily metabolism and the secretion of the glands of the digestive system have their centers in this region. The medulla oblongata is that part of the brain in which the centers for the control of the organic functions of the body reside. Twelve nerves, known as *cranial nerves*, enter or leave the central nervous system above the level of the spinal cord, some of them in the medulla.

Cerebellum. — Above the medulla and to its rear is an important structure, standing quite apart from the brain stem, known as the *cerebellum.* This two-lobed structure has as its primary function the coördination of motor control. It helps the body to secure steadiness and to maintain general equilibrium. *Synergia* is the name given by neurologists to the function of the cerebellum. Synergia is defined by Tilney and Riley as motor association, this association being carried out in movements of different parts of the same limb or in synchronous movements of the limbs, of the limbs and head, or of the trunk, limbs, and head together.[1] We are so used to the proper working of the cerebellum that its functions are most clearly seen when it operates imperfectly, this imperfect operation being characterized chiefly by inaccurate measurement of movement, inability to perform a succession of movements, and tremor.

Pons. — A structure which connects the cerebellum both with the cerebrum and with lower parts of the brain stem is the *pons.* Although this primary function of connecting gave the pons (bridge) its name, this region of the brain stem is the seat of several additional functions, those concerned mainly with controlling muscles of the face and jaw, and receiving sensory impulses from the region of the face. Certain of the eye movements are controlled in this region, so that the *nucleus abducens* is known as the pace-maker of eye movements, especially those in the horizontal plane. Reflexes centering in the pons are those connected with the movement of the jaw, contraction of the facial muscles (including those of facial expression), control of eyelids, secretion of tears, and turning of eyes in response to a sudden noise.

Mid-brain. — Above the brain stem is a region known as the *mid-brain.* The mid-brain shows a still larger area of cross section, and the swellings increase in size, indicating that the nuclei of neurone endings are larger (and more important). Perhaps most important is the fact that the nerves carrying the senses of sight and sound enter in this region, and nuclei serve as relay stations between these senses and the cerebrum. Reflexes in this district have to do with pupillary control; protective movements of the eyelids, eyebrows, head, and arms in response to strong light; accommodation and convergence movements of the eyes; and movement of the eye, head, and body in the interest of visual attention.

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[1] Tilney, F. and Riley, H. A.: *The Form and Function of the Central Nervous System,* p. 468. Paul B. Hoeber, 1921.

Thalamus. — Above the mid-brain is a region called the *interbrain.* Here lies the *thalamus*, a region that has immense significance for conduct. Histological analysis indicates that in the thalamus is the first relay station for the great sensory pathways of the body, which have been gathered in at all levels of the spinal cord and have ascended to this level in the dorsal white column. It is the vestibule of body sensibility, an internode of the great sensory pathways of the body on their way to the cerebrum. The texts on neuro-anatomy lay stress on the fact that the thalamus is the center for feelings and emotions. Clinical evidence shows that the irritation and destruction of the thalamus leads to changes in affective expressions and attitudes. It is thought that the seat of the emotions lies in this region. The writers on neuro-anatomy, although keen in their anatomical analysis, have clouded the interpretations of their findings by an uncertain psychology. Their interpretation in terms of consciousness, awareness, or feeling smudges the behavioristic significance of the thalamus. If the thalamus is a vestibule of bodily sensitivity, it plays a most important part in the nature of conduct. Stimulation of the sensory areas is going on all the time, and appropriate responses of a reflex nature are being made. These reflexes operate so smoothly that under ordinary circumstances we are not aware of them, just as it was pointed out in connection with the cerebellum that we are ordinarily not aware of its synergic functions. It is only when excess stimulation arises, that distinctive reflexes appear. Excessive stimulation of the surface of the skin, excessive stimuli due to light, too rapid motion, and unaccustomed objects, arouse characteristic movements of escape and avoidance, or attack and combat. Physiological changes also occur, which will be described in a later section in connection with the sympathetic nervous system. The neuro-anatomists also include in this connection those sources of irritation arising from thirst, hunger, or sexual excitement. There are good experimental reasons for believing that the somatic sensory impulses and the visceral sensory impulses do not have the same nuclei in this region, for the responses that they evoke are quite distinct. It may be seen that these centers are of the highest importance for the purpose of understanding the nature of conduct. Here are centers in the nervous system that issue in action of an impulsive or semireflex character. We shall see later that to these phenomena may be traced the source of certain types of conduct, and that a reversion to action on this level with improper cerebral control is the cause of much of what is called abnormal behavior.

Cerebrum. — Finally we come to the end brain or *cerebrum*, which in man has reached such a high state of development. It is estimated that the cerebrum in man represents approximately 70 per cent of the entire nervous system. The cerebrum represents the end result of the tendency which was evident as the survey of the nervous system proceeded. With the possibility of the interrelationship of more and more systems in the body, a more fluent and flexible form of control results. This reaches its maximum with the addition of the cerebrum. Practically all sensory impressions, except perhaps some of the more deeply organic, reach the cerebrum; and practically all motor control, except again some of the organic, starts from the cerebrum. An added feature of the cerebrum is the fact that practically every part is in connection with every other part through a complex system of association neurones. It is little wonder that this great increase in flexibility should be termed voluntary as contrasted with the less elastic involuntary reflexes of the lower centers.

The cerebral cortex is divided laterally into two hemispheres, and each hemisphere into seven lobes. Each lobe is separated from its neighbors by a crease known as a *fissure*. Attempts have been made to locate functions in different parts of the cerebrum, but these attempts have been only partly successful. A well-defined motor area has been located which serves as the jumping-off region for the motor neurones, and a sensory area has been located which serves as the end station for sensory neurones. The *occipital* lobe has been identified as a center for the visual functions. The *temporal* lobe has been found to be associated with auditory functions. Certain regions seem to be connected particularly with the senses of taste and smell. Other regions of the cerebrum are even less definitely localized. To the *parietal* area is commonly assigned the function of blending and associating the impressions and responses of the major senses. The frontal lobe is least definitely localized, but clinical evidence and speculation assign to it the summation of the association processes, which gives it the function of gathering together, blending, and redirecting all the other processes, so that it becomes the seat of choice and the will. Intelligence is displayed by most of the behavior which is controlled by the cerebral centers, but no intelligence is more effective than that which emanates from the forms of volitional, coördinated control, thought to issue from the frontal lobe.

The immense possibility which the cerebral cortex offers to reactions resulting from the main senses of sight and sound suggests two ways in which the cerebral cortex gives man superior control over his environment. In the first place, minute analysis of the environment is made possible. When this minute analysis results in systematic behavior whereby likenesses and differences are responded to in various settings, we have the possibility, on the one hand, of generalized conduct (*confacts*), and on the other, of generalized thinking (*concepts*). This possibility of analysis and generalization gives man his greatly enlarged capacity of reasoning and his more extensive control over the physical environment. In the second place, the associations which the cortex makes possible enable man to symbolize by localized reactions practically all his varied experiences. This power to symbolize experience has resulted in language. By being able to recall past experience in symbolic fashion, man is able to abridge space and time, and to substitute an extremely rapid trial-and-error activity, which we term thinking or problem solving, in place of the gross trial-and-error activity of animals on a lower plane not equipped with any system of symbolic reactions.

Autonomic nervous system. — One part of the nervous system deserves separate and special attention. This is called the *autonomic* nervous system — autonomic because it performs its functions without voluntary control. This part of the nervous system controls the organic functions of the body. Its neurone endings lie in the smooth musculature of the viscera. Also controlled by this system are the sweat glands, the changes in the diameter of the blood vessels, and the erection of hairs. The type of response given by smooth muscle is largely one of tension or tonus rather than actual contraction or movement.

What is most interesting about the autonomic nervous system is its three sections. The *cranial* section has its nuclei in the medulla and mid-brain and leaves the central nervous system by nerves issuing from that region. The neurones of the autonomic system make an additional break outside the central nervous system in nuclei called *ganglia* or *plexuses*. The cranial division controls the lens and iris muscles of the eye, the salivary glands, the digestive system, the bronchial tubes, and the heart.

After a space in the spinal cord in the region where nerves controlling the shoulders and arms emerge, there is a second division of the autonomic system in the thoracic and lumbar regions, known as the *sympathetic* division. After another space in the region where the nerves controlling the lower part of the trunk and legs emerge, is the *sacral* division of the autonomic system. The sacral division has the threefold function of controlling micturition, defecation, and the reactions of engorgement of erectile tissue in the sexual organs.

Functions of the autonomic system. — The sympathetic system seems to have for its function the opposing of all reactions of the cranial and sacral systems. The cranial system inhibits the tear glands, the sympathetic system stimulates them; the cranial system constricts the pupils of the eyes, the sympathetic dilates them; the cranial stimulates (through its artery) the salivary gland, the sympathetic inhibits it. The cranial system causes the hairs of the body to lie smooth, constricts surface arteries of the skin, and inhibits the activities of sweat glands; the sympathetic causes the hairs of the body to erect, the surface arteries to expand, the sweat glands to secrete. The cranial inhibits heart action, the sympathetic accelerates it; the cranial stimulates the tonus and peristaltic action of the stomach and intestine and increases the flow of secretions, the sympathetic inhibits these activities.

Cannon has painted a vivid picture of the functions of these divisions.[1] The cranial division is a conserver of bodily resources. Through its mediation the organic processes function in ordinary living. The sacral division controls the mechanisms for emptying. The sympathetic division in opposing these reactions has the function of preparing the body for immediate and enlarged bodily activity. The digestive processes are stopped. Blood is withdrawn from the interior of the body to the somatic system, and sugar is poured into the blood stream from the liver, both of which phenomena enable the muscles to make immediate and powerful contractions. The hormone adrenin, secreted by the adrenal glands and liberated into the blood, is helpful in restoring the irritability of fatigued muscle and in hastening the clotting of blood. The sweat glands prepare to care for increased bodily heat. The pupils of the eyes are enlarged to admit more light. The body is automatically prepared for extraordinary exertion in battle or flight.

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[1] CANNON, W. B.: *Bodily Changes in Pain, Hunger, Fear, and Rage.* D. Appleton and Company, 1915.

The cranial and sacral divisions have their own interior stimuli. The organic functions of the body ordinarily act as a closed system. Neurologists do not define the stimulus of the sympathetic system, and, therefore, one is left to speculate regarding the stimuli which bring the sympathetic system into action by referring to the known facts of behavior. These facts reduced to simplest terms seem to indicate that *excessive stimulation* of whatever sort is a sufficient stimulus for setting off the action of the sympathetic nervous system. Strong lights, loud noises, swift movements, and irritation or destruction of the skin are all known to result in the characteristic responses accompanying a discharge of the sympathetic system. A combination of irritating stimuli will do the same thing. These excessive or irritative stimuli early in life become identified with persons, objects, localities, and the like, so that the sympathetic system of most persons discharges in response to a variety of situations more or less unique to each individual.

Neurologists have noticed a distinct difference in the functioning of the cranial-sacral division and the sympathetic division. The cranial-sacral division is so arranged as to produce specific action. One stimulus affects the heart; another affects the process of urination; still another affects the control of the iris of the eye. On the other hand, the neurones of the sympathetic system are arranged to facilitate *diffuse* discharge. Ennervation of the sympathetic system results in its characteristic response over the whole system. It acts as a unit. The action of the sympathetic system is characteristically of an emergency type —

once aroused to action it submerges and reverses the action of the cranial-sacral divisions. This fact has an important bearing on the theory of emotions.

The neurone. — The *neurone* itself deserves attention, for an understanding of its nature and the manner in which it carries on the process of conduction helps interpret behavior. A neurone is a specialized cell. Although neurones differ in structure, they have certain features in common which serve to identify them. Roughly speaking, a neurone has three parts — *dendrite, cell body*, and *axone*. The dendrites are short, hairlike fibrils or processes whose function is to *pick up* the nerve impulse from the specialized cells of the receptor organ or from other neurones. The cell body is the center of growth and nutrition of the neurone. The axone is usually a long, hairlike process whose function is that of carrying the nerve impulse over long distances in the body. A motor impulse for the foot may be sent out by a neurone whose cell body is in the lower part of the spine and carried by a single unbroken axone from the spine to the foot. Microscopic examination shows neuro-fibrils within the neurone which undoubtedly are the specific conducting elements. Since these traverse the cell body, it is probable that they pick up impulses in the dendrites and carry them without a break to the extremity of the axone. The place where the axone of one neurone is adjacent to the dendrite of another is called the *synapse*, and because the nerve impulse has to be transmitted across this gap, the synapse has peculiar importance. It is believed that all phenomena of learning depend upon the changes in the conditions of synapses.

Physiology of conduction. — The physiology of conduction is now well understood, but it must be described in terms of chemistry. The following description is borrowed from Chapter XII of Troland's[1] *Mystery of Mind*. The liquid of the nerve fiber is shown to include carbonic acid, the chemical formula of which is H_2CO_3. When carbonic acid is in a water solution it tends to ionize — in other words, the molecule of the acid tends to split up in a certain way. The hydrogen atom drops off its proton. This proton (called the hydrogen ion) carries a charge of positive electricity while the carbon, oxygen, and hydrogen electron (called the carbonate radical or the carbonate ion) carries a charge of negative electricity. The mass and also volume of the free protons carrying the positive charge are much less than those of the carbonate ion. The formula of the reaction is

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[1] TROLAND, L. T.: *Mystery of Mind*, Chap. XII. D. Van Nostrand Company, 1926.

$$H_2CO_3 \rightleftarrows H^+ + HCO_3^-.$$

The membrane of the nerve fiber, consisting of molecules in vibration, may be thought of as porous in comparison with particles of the size of protons. As a membrane it offers sufficient density to retain most of the carbonic acid radicals, but the hydrogen ions, which have become detached in the process of ionization and are in rapid vibration, find it possible to slip through the membrane of the nerve fiber. This process is known as osmosis.

These hydrogen ions do not leave the neighborhood, however, for carrying as they do a positive charge of electricity, they are attracted to the negative radical on the other side of the membrane. The result is that the outer surface of the membrane becomes covered with hydrogen ions and hence carries a charge of positive electricity, while the inner surface of the membrane is covered with a layer of negatively charged carbonic acid radicals. This is known as an "electrical double layer" and the nerve fiber is said to be *polarized.*

This polarization has been demonstrated experimentally. By using delicate electrometers it has been shown that there is a difference in potential between the longitudinal surface of a nerve (positive) and the cut end of the nerve (negative). Howell likens the nerve to a battery. He compares the cut end to the zinc plate and the longitudinal surface to the copper plate. If wires are attached to the nerve, the end attached to the longitudinal surface represents the positive pole or anode, and the end of the wire attached to the cut end of the nerve represents the negative pole or cathode.[1]

When a nerve current passes along the neurone, this polarization has been noted to suffer a decrease in intensity. In other words, the nerve fiber is depolarized by the passage of the nerve current. This phenomenon is explained by assuming that the porosity of the membrane is temporarily increased. This enables the carbonate ions to pass through and mix with the hydrogen ions, thus neutralizing the polarized layers in that region. This is supposed to be a reversible action; increased porosity results in depolarization, and depolarization results in decreased porosity. If there is increased porosity of the membrane at any particular spot, depolarization results, and this depolarization tends to spread or lap over to adjoining regions. This spread of depolarization leads to increased porosity, and thus the depolarization tends to spread or travel in a kind of wave. This action is very similar in character to the burning of a fuse. Troland states that the nerve impulse is about three hundred feet a second in human nerves.

The tendency of the fiber or membrane is to return to and maintain its normal state of tension or porosity, so that once the depolarizing current has passed, the membrane decreases its porosity, and polarization rapidly returns. This return to a normal state of polarization overshoots the mark, and for an instant the nerve is more excitable than usual.

A neurone is stimulated by neutralizing its positive layer at some point. If this neutralizing takes place slowly, the membrane can combat it by decreasing the porosity. But if the positive ions are rapidly neutralized to produce a critical degree of depolarization, the resistance of the membrane breaks down and yields to the pressure to become porous, and the train of excitation is started. This critical point is known as the *threshold*, and the intensity of a stimulus must exceed a certain critical value in order that there be an effective response of the nerve.

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[1] Howell, W. H.: *A Textbook of Physiology* (Ninth Edition), p. 97. W. B. Saunders Company, 1924.

That condition of the neurone at the moment when a nerve current passes is known as the "refractory phase." At that moment the neurone is in a state of lessened excitability, and stimuli applied then have no effect. Excitability returns with a return to the normal state of polarization.

It may be deduced that a stimulus which excites a resting nerve travels the length of the nerve under the energy contained in the neurone itself. The magnitude of the nerve impulse is the same, regardless of the strength of the stimulus. This is known as the "all-or-none" principle. The nerve current acts very much in the same way as the train of a spark along a fuse. As far as we know, the character of the nerve impulse is the same in one neurone as in another. Differences in intensity of nerve currents depend on such things as the resistance of the synapse, the number of neurones stimulated, and the position of the neurones.

Physiology of conduction over the synapse. — The physiology of the nervous impulse at the synapse is not clearly understood. Probably all that should be done at the present time is to state what is known experimentally about nervous conduction across the synapse and to await further light before a theory is outlined.

1. Passage of the nervous impulse along a nerve fiber is at a fairly constant velocity. There is an appreciable lengthening of time necessary for the transmission of an impulse when a synapse is intercalated in a neural arc. It takes longer for an impulse to traverse a length of nerve broken by a synapse than an unbroken neurone. Reaction time, as it is technically measured in psychology, would seem to be a function of both the *length* of the

neural arc traversed and of the *number* of synapses in the arc. Simple reflexes have the shortest reaction time. The increased time necessary for acts of choice or decision is undoubtedly due in part to increase of synaptic connection.

2. A synapse has polarity. Although nerve impulses may run in either direction along a nerve fiber, there seems to be a definite polarity or direction at the synapse. Axones transmit impulses to dendrites and not *vice versa.* Afferent and efferent neurones never interchange their functions.

3. The branching of the ends of an axone and of a dendrite makes possible the correlation of impulses. One axone may distribute its impulse to many neurones, and one dendrite, through its rootlike ending, may pick up impulses from many neurones. This possibility of redirection of stimuli is the basis for the development of skills and for varied possibilities in learning.

4. There is a possibility of the summation of stimuli at the synapse so that minute, successive stimuli, too weak to bridge the gap from one neurone to another, may have their effects reinforced until the impulse is passed on. This phenomenon of summation has been thought to be connected with the degree of potential due to a greater ionization concentration, but the details of the physiological process have not been completely worked out. This summation phenomenon will later be shown to help explain the continuity of conduct. Weak but persistent organic reactions help give activity direction and persistence, and probably is a basis of purpose.

5. This last phenomenon is connected with the variability of resistance at the synapse. This may be partly a simple matter of spacial contact of the neurone endings. Fatigue and sleep seem to increase and decrease the resistance respectively. This is undoubtedly a matter of porosity of the membrane already alluded to. Drugs affect the resistance at the synapse in a remarkable way. It is also very probable that hormones from the ductless glands affect the synaptic resistance.

6. Refractory phase seems especially noticeable at the synapse. There seems to be some evidence that the recovery process is longer at the synapse than in the nerve fiber itself. There seems also to be evidence that the time of recovery at the synapse may be variable, so that the refractory phase may be extended, giving a basis for inhibition.

It is probable that these phenomena can be explained by noting the effects of two adjacent surfaces coated with positive ions. These surfaces tend to reinforce each other's polarizations. Since it is known that nervous conduction usually acts, not as a single passage of the impulse, but as a series of impulses in rapid succession, the effects of summation and piling up of potential will be needed to complete the explanation.

This brief and summary review of the biology, anatomy, and physiology of the nervous system supplies the basis for the understanding of the nature of conduct. Many psychology texts contain a chapter on the nervous system, but it is usually an isolated chapter. Subsequent discussions have little reference to the structure of the nervous system. It is a thesis of the present analysis of conduct that it must be consistent with the structure and operation of the nervous system. All activity is stimulated by neurone impulses, and all neurone conduction must be originally stimulated at some afferent point. All activity is response to a stimulus, and, as far as is known, there is no possibility for a neurone to "go off" unless stimulated in the usual way, either by stimulation, by a sense organ, or by another neurone. Every nervous impulse apparently proceeds until it issues in the stimulation of a muscle or gland, unless it reaches too high a synaptic resistance. Neurone conduction follows the path of least resistance. The train of the impulse along a neurone drains into other neurones according to the synaptic resistance. It may be seen that the state of synaptic resistance in reality controls our behavior — it is the core of choice and direction.

Careful analysis reveals nothing in the body besides the nervous system which could act as a control of activity. All the intricate problems of choice, purpose, reasoning, problem solving, and the like must eventually be explained by neural paths and synaptic resistances.

Summary. — The body, which may be likened to a machine, is composed of nine systems, each of which has its special function. Conduct is the overt activity which our body learns for keeping itself in running order. The nervous system is the agent which connects the outside world with the responding mechanisms. The nervous system consists of a multitude of fibers called neurones that connect different parts of the system. These neurones end in areas called nuclei, which are also the origin of the control of various bodily functions. In man, the cerebrum is the organ which redirects nervous currents in such a way that it becomes the seat of reason and choice. The autonomic nervous system controls the organic functions of the body and under severe stimulation gives rise to emotion. Neurones carry the nervous impulse in a wave of electrochemical activity. The phenomena of conduction at the synapse is of special importance in explaining phenomena of behavior.

CHAPTER III

THE MAIN DIVISIONS OF CONDUCT

Classification of conduct — Classification of stimuli — Classification of fields of response — Stimulus-response groups — Integration of reactions — Response to elements of the environment — Summary.

Classification of conduct. — Any classification of conduct is bound to be more or less fragmentary or artificial. The conduct of a man involves all of him. The whole body is involved in the adjustment to even the slightest change of situation. The gross muscles involved in reflexes react; the skeletal muscles which counteract the force of gravity change their tonus; and the small muscles of the face, larynx, and hand function. The visceral system also reacts along with the skeletal muscles. The smooth musculature of the whole digestive tract is sensitive to a greater or lesser degree to the same stimuli that affect the striped muscles. The glandular systems, both the duct and ductless, also respond by increased or diminished secretion to new stimuli. So it is an artificial procedure to abstract one set of responses. Likewise it is artificial to abstract one or another set of stimuli, for the body is constantly reacting to many stimuli at the same time, both peripheral and central.

Classification of stimuli. — A valid classification of conduct must be based on bodily states. Neurologists recognize three separate fields for the reception of stimuli. We shall call them the peripheral, kinaesthetic, and visceral groups.

The peripheral group includes all sense organs located in the skin, such as those for touch, pressure, heat and cold, and pain, and the organs for special senses such as for hearing, sight, taste, and smell. These are senses which are stimulated by impressions from the outside. By means of these senses we have an avenue of contact with the outside world, and through them we are able to respond to, and are in a sense controlled by, people, plants, animals, rocks, etc., and the light, color, heat, odors, etc., which serve to identify them. Sherrington calls this group of sense organs the *exteroceptors*, meaning the sense organs excited by stimuli arising outside the body.

The second group, the kinaesthetic, includes the afferent nerve endings among muscle fibers and around the surfaces of tendons and joints. The semicircular canals of the inner ear, which give us static and equilibratory sensitiveness, also may be included in this second group. This group makes the body sensitive to its own activity and becomes exceedingly important in the acquisition of skills and trains of coördinated activity. The lack of this set of receptors becomes apparent in the ataxias, when the patient loses his kinaesthetic sense and has to readjust his bodily control to external stimulation. By means of these senses the body no longer is dependent on external stimulation for carrying through a series of acts, but is able to respond to its own previous act. Sherrington has called this group the *proprioceptive* group, meaning those sense organs lying within the deep tissues of the body for the coördination of somatic reactions.

A special set of these kinaesthetic senses has such importance for man as to warrant being placed in a separate category. I refer to the kinaesthetic senses connected with the vocal organs or with the organs concerned with subvocal activity, wherever or whatever they may be. The special nature of these sense organs is unknown — we recognize their service in their function of perfecting our use of language. Language has a value and usefulness for man out of all proportion to its physiological counterpart, inasmuch as it enables him to symbolize his experience and hence respond to things *in absentia*. The importance of language may be best seen physiologically in the extremely well-developed cerebral cortex of man as compared to the cortex of lower animals. If one were to see the bodily mechanisms for language, one would never suspect the important part that they play in conduct. It is well to understand that these organs which are the basis of language activity are fundamental to all our speech and thinking. By means of the kinaesthetic senses connected with the vocal organs and the less-known organs concerned with subvocal activity, we are not dependent on external stimuli to arouse our thoughts, but can let one word or idea serve as the stimulus to the next word or idea, or one thought as the stimulus to the next thought. The whole process of thinking is dependent on these kinaesthetic sensory stimulations. It is not valuable to dwell upon these physiological counterparts of thinking because we know so little about them; thought can be studied only by its overt responses. But it is well to know that the mechanism of thinking depends on the kinaesthetic sense, and that the importance of thinking to conduct is enough to warrant our setting apart this phase of the kinaesthetic sense in a category by itself.

The third receptive field, the visceral, consists in general of those afferent nerve endings in the smooth muscle of the viscera. This group receives messages from the activities of digestion, circulation, excretion, and reproduction, usually to furnish readjustment of these activities. It works largely through the autonomic nervous system; although not entirely, in the case of some of the more specialized functions. In general, this receptive field works below the level of voluntary control. Seldom does it flow over into language; the organic functions of the body work automatically and reflexly. Sherrington has called this group the *interoceptive* group, meaning to include in the group those sense organs excited by stimuli arising within the viscera.

Classification of fields of response. — The response side of the human mechanism may conveniently be divided into two main fields, as is usually done by neurologists. The first and main field is that of the striped musculature. The responses that issue through the striped musculature include the adjustments that a man makes toward his outer environment. They make up the bulk of the responses with which we are concerned in the study of conduct.

A special group of these response mechanisms is that concerned with speech and language. The earliest speech efforts of the child are obvious and are located in the vocal organs. Gradually, however, these responses may become slurred or abbreviated. At any rate, the time eventually comes in a person's development when he thinks without the use of any apparent muscular apparatus. It is not the purpose here to enter into or to take sides in the controversy which is now raging as to just what is the mechanism of thought. For our purposes it is not necessary that we know definitely the bodily parallel of thought. A statement of J. B. Watson's is, I think, pertinent here. He says, "Some writers make a complete mystery of it; something that we can talk about and discuss, something whose manifestations we may observe, but whose essence we can never discover. Others have considered thought processes as a correlate of cortical activity (a common assumption). They assume that it is something, no one knows quite what — that can go on in the absence apparently of all muscular activity."[1] Whether one wishes to consider thought as the correlate of muscular activity of an undefined sort or merely the correlate of cortical activity is not pertinent here. All that is necessary is to see that thought is a response, even if muscular, sufficiently peculiar and sufficiently significant in human conduct to be marked off separately.

The second field of response is the visceral, including the responses of the smooth musculature and also of the glands. These are the responses of the body in its organic functioning — digestion, metabolism, circulation, etc. These responses work involuntarily as a whole.

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[1] Watson, J. B.: *Psychology from the Standpoint of a Behaviorist*, pp. 345, 346. J. B. Lippincott Company, 1919.

Stimulus-response groups. — Our next problem is to see how these various groups of receptors and effectors may be linked together. The following are the possibilities:

1. Muscular response to peripheral stimulus
2. “ “ “ kinaesthetic “
3. “ “ “ verbal “
4. “ “ “ visceral “
5. Verbal “ “ peripheral “
6. “ “ “ kinaesthetic “
7. “ “ “ verbal “
8. “ “ “ visceral “
9. Visceral “ “ peripheral “
10. “ “ “ kinaesthetic “
11. “ “ “ verbal “
12. “ “ “ visceral “

1. *Muscular response to peripheral stimulus.* — This is the most obvious of the stimulus-response groups. Most of the reflexes fall in this category. A dog scratches with his hind leg at any point on his side where an irritating stimulus is applied. A dog will extend his foot when a stimulus is applied to the sole of the foot. A baby thrusts out its hand to grasp the toy or food which it sees. It is not necessary to multiply illustrations in adult life. We answer bells and respond to commands. We quickly remove our hand from a hot object or from an electrical shock. We are only conscious of the guidance that our activities receive from sight when we try to tie our tie or comb our hair away from the mirror. Such an act as turning the street corner or stepping from the curb is dependent on visual cues, although we often would be at a loss to state definitely what the cue is. The extent to which every act is conditioned by sensory cues is best illustrated by noting the controls of someone who has lost a sense. A good illustration of some of these controls is given by Charles Magee Adams in the *Atlantic Monthly* of November, 1924 on the reactions of the blind. I quote a passage:

> Snow and ice form peculiar handicaps to the blind in getting about, not because of added risks, but because they radically alter familiar conditions.

Even an inch or two of snow muffles normal sound reflections so effectually that the entire audible aspect of a place is changed, and a very thin coating of snow or ice is enough to blot out landmarks under foot as important to the blind as houses and hills are to the seeing, thus necessitating the learning of new directions and reactions.

We may call a muscular response to a peripheral stimulus an *overt act.*

2. *Muscular response to kinaesthetic stimulus.* — This stimulus-response group is derived from the preceding group. First we must act. But once a bond has been set up between a peripheral stimulus and a muscular response, a new association is formed between the movement of the muscles and the act. The movement of the muscles themselves may be conditioned to serve as stimuli, through the kinaesthetic sense, to the next movement of the series. All coördinated serial acts probably come in this category. Walking is a good example. To be sure there is external stimulation in the pressure on the balls of the feet. But each position of the act of walking, each contraction or relaxation, each difference in tension on the tendons or difference in position of the joints sends its signal through the nervous system as a cue to the next position of the series. The control of walking is partly in the body itself, and it becomes a rhythmical exercise. The same is true of swimming or dancing. Slightly more complex, but depending in part on the same kinaesthetic control are those acts of skill such as piano playing, typewriting, ball tossing, bicycle riding, etc. Skill of any kind, the development of coördinated activity, is only possible by the use of muscular response to kinaesthetic stimuli. In these activities the body becomes more self-determined and is only partly dependent on peripheral stimulation, although in walking it is pressure on the balls of the feet, in swimming the pressure of the water, in piano playing pressure on the finger tips and sound that act as basic controls.

We may call a muscular response to a kinaesthetic stimulus an *act of skill*, although it must be remembered that the kinaesthetic sense is never an exclusive control in skill.

3. *Muscular response to verbal stimulus.* — This is the much debated group named by James "ideo-motor acts." The true position of this stimulus-response group has been much obscured by controversy. James, for instance, categorically states that "every representation of a movement awakens in some degree the actual movement which is its object."[1] The word *every* in this statement lays the whole idea open to attack and obscures the basic fact of ideo-motor activity. Thorndike, in correcting this statement, says, "I contend that an idea does not tend to prove the act which *it is an idea of*, but only that which it *connects with as a result of the laws of instinct, exercise, and effect.*"[2] The student of Thorndike's writings has gone away with the first part of this statement firmly in mind — that ideo-motor activity is an exploded theory. The influence of Thorndike's writings in educational and psychological circles has been great; and consequently in the last decade little has been heard about ideo-motor action. The second part of the above statement, although permitting ideo-motor activity as a possibility, has not been susceptible of clear interpretation. The average student or reader has not figured out how frequently instinct, exercise, or effect has served to connect ideas with acts. Thorndike, in trying to break down James' 100% ideo-motor activity, has brought it down perilously close to 0% in the minds of his readers by such statements as, "It appears then that the great majority of movements are not produced by ideas of them and that the majority of ideas of movements do not produce the movements which they represent."

A few illustrations will suffice to show how potent are ideas in producing action. As I write this, Christmas time is approaching, and the newspapers are full of advertisements inducing people to buy Christmas gifts. A certain new Fifth Avenue store, which is slightly out of the shopping zone, is conducting a vigorous advertising campaign to induce persons to patronize it. Certainly this store believes in the power of ideas to control action. The whole advertising industry of our country rests on a certainty that people's conduct can be controlled by what they read. The newspapers contain other verbal stimuli to activity. Millions of people are induced to vote on a certain day through verbal stimuli; thousands of people fill out income-tax blanks and pay the tax under the compulsion of verbal stimuli; thousands are stimulated to invest or speculate by reading or hearing that others are doing so; theaters, motion-picture houses, football and baseball contests are crowded through the power of verbal stimuli. Educators train 20,000,000 children in school to read so that verbal controls of conduct may be generally effective. Ideo-motor activity is tremendously effective. There is no question but that this small group of kinaesthetic stimuli have powerful control over muscular responses. Thorndike's statement above is correct, yet ideo-motor activity is a very real conduct force.

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[1] JAMES, W.: *Psychology* II, p. 526. Henry Holt and Company, 1890.

[2] THORNDIKE, E. L.: *Original Nature of Man*, p. 177. Teachers College Bureau of Publications, 1913.

We shall call a muscular response to a verbal stimulus an *ideo-motor act*, recognizing that although not every verbal stimulus may issue in overt conduct in an obvious way, ideo-motor activity is a potent force in our highly organized language civilization.

4. *Muscular response to visceral stimulus.* — This stimulus-response group has been much neglected. Psychologists have been so interested in muscular responses to peripheral stimuli and have been so much better able to study them, that the muscular responses to visceral stimuli have been somewhat neglected. The response to hunger is a good example. Cannon has shown that hunger is a series of contractions of the wall muscles of the stomach. These contractions are the stimuli for bodily movements to alleviate this hunger. Cannon says of

hunger, "It is a sensation so peremptory, so disagreeable, so tormenting, that men have committed crimes in order to assuage it. It has led to cannibalism, even among the civilized. It has resulted in suicide. And it has defeated armies — for the aggressive spirit becomes detached from larger loyalties and turns personal and selfish as hunger pangs increase in vigor and insistence."[1] The pressure of seminal fluid in the male also causes restlessness and a seeking for peripheral stimuli by means of which the pressure may be relieved. Changes in the digestive process, in the content, pressure, and rate of blood, in rate of breathing, and other phenomena following a stimulation of the sympathetic nervous system, have their effect qualitatively on muscular response by greatly increasing the possibility for immediate vigor of action. The glands of the body also, in ways not always clearly understood, are drives for bodily activity. These muscular responses to visceral stimuli are capable of great ramification through learning. Hunger in a strange situation results in restlessness and random activity. In a familiar situation we have learned how to satisfy hunger economically by going directly to the dining table or to the restaurant. An individual learns more or less successfully how to gratify his sexual needs. Likewise, we soon fall into set forms for the exhibition of anger or fear. I doubt if the extent to which our responses to these stimuli are conditioned is realized. For adults the getting of food is not merely going to the table and eating. We have to earn the food in ways that are provided by the economic organization. So the drive for much of economic activity probably goes back to these fundamental needs of hunger and sex. These organic needs originally do not have mechanisms, but learning quickly takes place which satisfies the drives. The drives do not define the nature of the activity which will satisfy, but once such an activity is acquired it tends to persist.

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[1] Cannon, W. B.: *Bodily Changes in Pain, Hunger, Fear, and Rage,* p. 232. D. Appleton and Company, 1915.

We may call a muscular response to an organic or visceral stimulus a *drive* or impulsive response.

5. *Verbal response to peripheral stimulus.* — In this group of stimulus-response reactions are the natural language reactions. They are most clearly seen in the language activities of babies learning to talk. A baby's first words are in response to things seen or heard. He says "box" or "dish" or "spoon" or "milk" only when he can see these articles. We never get away from this fundamental stimulus for speaking or thinking. Later in life the child is made to associate his already-acquired language mechanism with written or printed symbols that become eventually the prime stimulus for the arousing of language activity in the form of reading.

It is perhaps not realized how much of thinking is stimulated by peripheral stimuli. The very obvious example of using "trots" or "ponies" or the act of cribbing as an aid to memory is only a surface indication of the dependence of thought on external cues. "Out of sight, out of mind" is a familiar saying. The successful thinker makes use of all of the cues that he can summon to his command. He makes charts and diagrams, he outlines the progress of his problem, he fingers his apparatus or his tools in the hope that they will yield some clue to his problem. The most successful thinkers do not retire to their armchairs for contemplative meditation — they putter around with the tools of their craft in the laboratory.

We may call a verbal response to a peripheral stimulus *language* or *reading*.

6. *Verbal response to kinaesthetic stimulus.* — This group is a natural development of the reactions described in the last group. Observation, however, shows that we have only a meager vocabulary and limited practice in identifying our kinaesthetic states, or in linking them with language. Were we able to do so better it would help in the acquisition of all skills. The typist *feels* immediately when she has struck the wrong key even with-

out glancing at the copy. This gives rise to language in the shape of thinking "There's an error" or "I must go back and fix that up" or some expletive that she is in the habit of using following her mistakes. This is followed by a series of visual and verbal cues in the correcting process. But the actual verbal response to the kinaesthetic warning of error is inconsequential and trivial. So in golf, or any game of skill, a poor stroke is likely to arouse some inconsequential verbal response. One difficulty in teaching penmanship is that we have only a meager vocabulary to apply to the various kinaesthetic stimuli, and hence all progress in learning must be through a scrutiny of the written product and a vague groping for different controls which will lead to a more desirable response.

In another sense, undoubtedly there are kinaesthetic stimuli which do readily pass over into language. Some languages are helped by gestures of the hands and facial expression. Where gesture is the cue to the next verbal expression, we have a definite verbal response to kinaesthetic stimulation, but unfortunately these gestures have not been standardized and hence are not worthy of our study in the nature of conduct.

We may call a verbal response to a kinaesthetic stimulus *introspection* in part, although a great deal of this sort of activity has yet to be singled out and recognized.

7. *Verbal response to verbal stimulus.* — Here we are on much surer ground. Whatever the mechanism, it is evident that in connected speech or in a connected line of thought one speech element becomes the cue to the next. This does not, of course, begin to explain the production of language forms or the complexities of thinking, but serves as a partial basis for explaining the links that connect one speech element with another. Certain forms such as the phrases "in the," "by the," "it is," etc. can probably be explained totally by this kinaesthetic seriation. But the choice of words to express one's intent will be only partly explained by this sequence of word on word.

We may call a verbal response to a verbal stimulus *thinking* or *association*, realizing that we are here concerned with only a part of the control of the exact sequence that we find in language.

8. *Verbal response to visceral stimulus.* — Here we are back again on doubtful ground. In a direct sense there is very little connection between visceral stimulation and verbal response. We are not supposed, in a state of health, to be aware of our organic processes. Our hearts beat and our food is digested without our awareness of it. Sometimes when things go wrong we can feel these organic processes, and we say we feel pain or pressure or are choked or suffocated. But the vocabulary with which to describe our organic sensations is limited, and we are usually unable to furnish adequate descriptions to a physician who wishes first to get our verbal testimony of an ailment. For even our sexual reactions, which are of great importance to society, we have only a most limited vocabulary, and that is for the most part under social taboo. So, in a direct sense, there is very little direct passage from visceral stimulation to verbal response.

But an indirect sense, visceral responses of some kind are *probably* largely the determiners of our choice of words, language, and thought. The little child first has to use direct means to get food; if it is not directly forthcoming the only recourse is to cry. But once language is acquired, it becomes a potent tool for the satisfaction of organic needs. The baby may then ask for food, and find his requests are readily interpreted and answered. It is not possible to follow through step by step the development of language as conditioned by organic needs. The exact muscular or glandular reactions which act as stimuli for the exact choice of words as I write would indeed be hard to state. Perhaps my choice of words and ideas does not depend on present organic reactions but on those which have occurred in the past. But uncertain as is precise formulation, it seems certain that verbal reactions are largely conditioned and controlled by the great organic processes which act as stimuli.

A verbal response to a visceral stimulus is in part *introspection* and in part it is the *drive* and *guide* to our *speaking*, *thinking*, and *writing*.

9. *Visceral response to peripheral stimulus.* — This group of responses, although important, is usually underestimated. Watson, in describing an experiment of Lashley's, has given a good illustration of this group of stimulus-response reactions.[1] By means of a special instrument the reactions of the parotid gland in the mouth may be readily observed and measured. Visual stimuli, by a process of learning, come to serve as stimuli for increasing the flow of salivary secretion. This would be called in common parlance "watering of the mouth at sight of food." Experimentation also shows that the sight of food causes the gastric juices of the stomach to flow. Sex stimulation is notably dependent on sight, sound, and touch. Cannon has shown that the action of the sympathetic nervous system stimulated peripherally inhibits the normal actions of the digestive system and causes other organic changes. We probably only begin to know the extent to which organic reactions are dependent on or conditioned by peripheral stimulation.

We may call visceral response to a peripheral stimulus an *emotion* or a *sentiment*, although the terms emotions and sentiment sometimes are reserved to apply to response of which these organic reactions are stimuli.

10. *Visceral response to kinaesthetic stimulus.* — Not enough is known of the nature of kinaesthetic stimulation or of organic reactions to give any very useful illustration of this group. Extreme muscular effort will cause the sweat glands to secrete and this would seem to be an example in question, although here the stimulus may come via the blood. Healthy muscles also seem

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[1] WATSON, J. B.: *Psychology from the Standpoint of a Behaviorist*, pp. 30, 31. J. B. Lippincott Company, 1919.

essential for proper metabolism. Another good example is the effect of the equilibratory sense on the viscera in the case of excessive stimulation of the former, as in seasickness. But in general the stimulating effect of bodily movement on the organic system is so little known as to warrant our paying only a small amount of attention to this group. No special name has been coined for these reactions.

11. *Visceral response to verbal stimulus.* — Our failure to provide illustrations of the last group is no evidence that such reactions do not exist or are unimportant. For in the special group of reactions which we term verbal, arises a kinaesthetic stimulation which has a well-known power to govern visceral reactions. The orator warms up to his own subject, once he has launched himself in his speech. Angry words increase our anger. We can induce anger by angry thoughts, we can induce fear by fearful thoughts, and we can induce passion by libidinous thoughts. We are told that pleasant company and cheerful conversation aid in digestion. These verbal-visceral reactions have all the earmarks of learned reactions. There is no mystical control of mind over matter; in fact, we cannot by plan or purpose control our organic processes at all. These reactions are undoubtedly the results of conditioning. The verbal stimuli occurred at the same time that the organic responses were aroused by some other organic or peripheral control. Verbal-visceral reactions would not occur unless the organic processes had first been independently stimulated.

We may call a visceral response to a verbal stimulus an *emotion* or *sentiment* ideationally conditioned.

12. *Visceral response to visceral stimulus.* — Whereas muscular response is usually to peripheral or kinaesthetic stimulation, so visceral response is normally to visceral stimulation. Once food is swallowed the whole digestive process proceeds automatically. Each stage of the organic process becomes the signal for the next stage. The act of swallowing is a good example.

The contraction of muscles at one level becomes the signal for contraction at the next level, and the process appears to be a wave or flow of muscular contraction carrying with it the food or liquid.

A visceral response to a visceral stimulus may be termed an *organic process*.

Conduct, in the sense that we are using it here, refers only to muscular or verbal response, and that of an overt sort. Implicit verbal responses (thinking) and visceral or organic responses we do not class as conduct. Thinking may precede conduct and is often a prepotent determiner of conduct, as illustrated in the third group above, but until it becomes overt in the form of either speech or other muscular activity, it does not become truly functional. Likewise, visceral activity is exceedingly important as a control and as a determiner of conduct, but it is not in itself conduct as that word is used in this book. We shall accordingly be interested in thought and in the organic processes, not for their own sake, but because they exert such marked influences over conduct.

Integration of reactions. — In actual conduct the twelve groups of responses named above seldom if ever occur in isolation. Any act of conduct, as an act of honesty or of courtesy, implies several responses acting simultaneously or in sequence. We are not responsive to one stimulus at a time, but to many stimuli acting coördinately. We may be governing our response to light, heat, motion, and printed characters, as well as to kinaesthetic and organic sensations, all at the same time. While we are walking, our digestive system works, our heart pumps blood, our blood circulates, we breathe. At the same time we may be carrying on a lively conversation with a companion. We are sensitive, then, to visual and auditory sensations, as well as to the pressure of the side walk and the kinaesthetic stimulation of muscles, tendons, and joints necessary to walking; the organic processes provide their own sequential activity. The conversation may be of an emotional sort causing still other visceral reactions, and it may have been originated and kept going by the drive of stimulation of the sexual organs. Each of the groups analyzed above, therefore, goes to make the complete man, and at any given moment there is probably a complex lot of stimulus-response cross currents which make up human activity as we know it.

Response to elements of the environment. — Each response to a peripheral stimulus is either to the gross situation or to some aspect of it. Babies probably respond only to undifferentiated wholes in the environment — food, parents, toys, or crib. But childhood does not advance far before there is piecemeal inspection of objects, and the singling out of elements which may be common to several objects, even to several different classes of objects, as the cue to action. This differential sort of activity begins early and proceeds all through life. There seems to be no limit to man's ability to pick out minute elements or aspects of the environment and to respond to them in conduct. These minute elements may and often do become exceedingly powerful, prepotent controls of conduct so that man, who in an original state responds to food, clothing, members of the opposite sex, and shelter without much generalization, in our highly organized social life learns to respond to truth, fair play, scientific ideals, and slight evidences of approval or disapproval in others. I have termed these latter responses to subtle elements in the gross situation *confacts*, an awkward term, but one etymologically expressive of the meaning intended. As a concept is a verbal response to an element of a peripheral stimulus, so a confact is a conduct response to an element of a peripheral stimulus. As "concept" is derived from *concipere*, meaning "to take together," so "confact" is derived from *confacere*, meaning "to do together." Accuracy is an example of a confact. Accuracy is that set of responses that a person makes in matching actions to a social or personal standard. A confact may be of any degree of generality.

The butcher who sells meat in such a manner that what he claims to be a pound is not always within one-tenth of a pound is failing to respond to this subtle yet socially important element of the situation. But this same butcher may always keep his watch within a minute of the correct time. A confact may be overdeveloped and become an obsession, as in the case of a person who does everything with scrupulous accuracy to the limit of his sensory discrimination. There is nothing mysterious in confacts. Just as experience in drinking tea leads to the ability to discriminate between blends which to the uninitiated present indistinguishable tastes, so in conduct one may learn to respond to extremely subtle elements in the environment. Society puts a premium on certain confacts and holds them out as standards.

Finally it should be noted that there is no sharp line of demarcation between the conduct which is a response to a gross stimulus and a confact. We are always responding to less than the total stimulating situation. To many stimuli we react by neglect. So many acts or habits which are apparently responses to gross stimuli on closer scrutiny are, in part at least, responses to subtle elements. Take such an example as a man's act of courtesy in rising when a lady enters the room. Here the response is not merely to "person" and "entering" but also to "lady," — the last a discrimination which is made from clothes, hair, and more subtle features. "Lady" must be distinguished from "young girl," which again leads to another discrimination depending on more or less subtle elements. Probably most men have experienced that moment of indecision when confronted by the young adolescent girl and have been undecided as to which response to make. Such an act of courtesy would not normally be classified as a confact, yet it is a response to situation elements. Confacts are relative, and we are not in the position to draw a sharp line of distinction between them and those responses which are obviously to undifferentiated situations.

Summary. — Conduct is classified by the different groups of stimuli and of fields of response. Three groups of stimuli are recognized: the peripheral, the kinaesthetic, and the visceral. Two groups of response are the muscular and visceral. Verbal stimuli and verbal responses are so important, that, although included under the foregoing categories, they are considered separately. Twelve groups of stimulus-response combinations may be identified. These responses do not occur singly but act in coördination. An important feature of conduct is that response may be made to subtle factors in the environment rather than to separate gross objects or situations.

CHAPTER IV

CONDUCT CODES

Conduct as an objective of education — The need for the codification of conduct — Conduct *vs.* custom — Custom not codified — Custom imperfectly validated — Conduct codes — Special codes of conduct — Conduct codes too general — Conduct codes too ambitious — Conduct codes unanalytical — Conduct codes neglect overt habits — Conduct codes imperfectly validated — The Upton-Chassell Scale — Recent attempts at a more through analysis of conduct — Andrus inventory of habits of children — Charters' analyses of honesty — Summary.

Conduct as an objective of education. — The foregoing chapter attempted briefly to analyze conduct into its elements from a psychological point of view. In this chapter we turn our attention to conduct as one of the objectives of education. That conduct is an objective of education is so evident an assumption that no effort will be made to prove it. Certainly no one is born with conduct formed or determined. Our reactions to people and things have to be learned. It is true that there may be an hereditary predisposition to form certain habits and not to form certain others, but whatever the original resistances or facilitations, the habits themselves are learned. The fact that certain responses to people and things have been called instinctive may constitute a challenge to the universal truth of the above statements. But even so, the trend today is away from the specificness of instinct, toward instincts which partake more of the reflex nature and serve only as elements or fragments of a totally integrated habit activity. If, then, conduct is learned activity, to which proposition there is in the main no denial, it becomes an objective of education, for education in the broad sense includes the total learning process.

Need for the codification of conduct. — It is the thesis of this chapter that until conduct becomes codified, it cannot truly become an objective of education which can be planned, controlled, or guided. Conduct, which from our point of view is of central importance in education, has, to date, received only scattering or fortuitous attention from educators. Spartan youths were carefully inducted into the *mores* of the community. Schoolmasters have always confined their pupils to narrow lines of activity and have half consciously considered it their duty to mold gentlemen as well as scholars. Even today, most teachers timidly try to influence the conduct as well as the minds of their charges. But the effort is all quite incidental and superficial. It must not be concluded from this, however, that conduct has not been formed; it has been formed, but formal education has had little direct hand in its formation. Custom, the *mores*, social pressure of various sorts, have guided the formation of conduct. The school has formed schoolroom conduct, which transfers but slightly elsewhere. Business forms its special kinds of conduct. But the main lines of conduct are formed at home. On parents, then, has fallen the onus of guiding the formation of conduct habits of the children. Parents usually have gone about the task vigorously enough but have been guided only by the *mores* about them and by convenience. We are told on all sides today of the waning influence of the home and of the lawlessness of the growing generation. The school must provide education where other agencies fail, and there is urgent need at this time that it step in and take over the conduct education which formerly was cared for in the home.

If conduct is to take its place in school with other subjects of instruction, it must receive the same consideration as other subjects. All other subjects are carefully planned for; courses of study are constructed, and the goals or objectives for each year of instruction are laid down. Arithmetic has of late been receiving exhaustive analysis, until today we know definitely that 100 addition combinations, 100 subtraction combinations, 100 multiplication combinations, and 450 division combinations must be learned, and we are ready tentatively to state when they must be learned. We know definitely the most important words that a child should know how to spell and to read, and we will soon know what important English constructions he should know, both for use in his written composition and for comprehension in his reading. We are apprised of the errors that a child makes most frequently in language. Conduct, if it is to become an objective of education, must receive a similar codification, otherwise it will remain incidental and casual. Conduct, most ancient objective of education, is the most recent acquisition as one of the objectives of *formal* education.

Conduct *vs.* custom. — Conduct is largely a matter of custom. Custom is a habit in individuals which is widespread and practically universal in a group, and which is not the result of formal instruction. The unique character of custom — its tendency to spread throughout the members of a group — is based on well-known psychological principles. Customs are learned under the incentive of social approval when a person is young. Since others do the same thing we have been taught to do, eventually the sight of others performing an act becomes the stimulus for our performing the act. This is well illustrated in table etiquette. If we have learned to use knife, fork, and spoon in a certain way and others at the table follow the same etiquette, the use of these implements is unnoticed. But introduce a new mode, such as eating ice cream with a fork, and if others do differently from us, a disturbing stimulus is introduced. We become confused and annoyed and hastily attempt to readjust our habits. We are conditioned not only to the implements themselves but to their use by other people.

A general habit which is strongly built in everyone is that of uniformity. There is perhaps no habit which has more practice. If, in any situation, an individual breaks a custom, he introduces an element in the situation which is a stimulus to the others present. There is set up a conflict in the others to act in two ways; one, as the general setting in the past has prescribed; the other as the act of the offender suggests. In ordinary society where eating with the knife is not part of the recognized etiquette, the person who eats with his knife is frowned upon or is ignored and shunned, both being forms of disapproval which tend to bring the individual back into line and to make him amend his conduct to conform to established usage.

This process can hardly be called education in a narrow sense, in that it is not formal or planned education. Formal education strives to be critical of its own procedure. But the passing on of custom is education in that it is a form of learning. It is a process of whose significance the persons involved are not aware.

Custom not codified. — There are two main reasons why custom is inadequate as a basis for formal conduct education. In the first place custom is not codified. The explicit statement of educational objectives and the formal analysis of these objectives into constituent parts is the basis of formal education. One finds these analyses in courses of study and in curriculum investigations. But custom is uncodified. As soon as it becomes codified it has in part become civil law. To follow custom solely implies living the life of a backward, ignorant community. Making conduct a formal objective of education means that society will tend to break away from the traditions of custom and will put itself on a self-determined plane.

Custom imperfectly validated. — A second reason why custom is inadequate as a basis for conduct education is that it is based on imperfect validations. The origin of customs is obscure. Some certainly originated from religious observances, others have originated from laws whose reason have been forgotten. It is claimed that even those which are the residue of forgotten laws originated for religious reasons. It is said that in India, rats, which were previously caught, are set free in times of pestilence as a means of propitiation, and early Christians are said to have refrained from washing themselves as a protection against disease in times of epidemic. Many of our rules of etiquette are the results of imperfect validations; they may be right, they may be wrong, they may be inconsequential, but all are held as standards, and society observes the proprieties. These validations were originally generalizations, but often imperfect generalizations — either from false observation or from insufficient cases. I presume that many iron-bound customs that have governed the conduct of multitudes have sometimes been generalizations based on a single case.

Conduct codes. — Nevertheless, conduct, usually custom, has been codified in form of laws or statutes.

Code of Hammurabi. — One of the earliest known codifications is the Code of Hammurabi. This code, discovered by De Morgan in 1901, is engraved on a block of black diorite nearly eight feet high. The code consists of 282 paragraphs dealing with laws relating to property and person. In part it codifies the customs of the time and in part shows evidence of the humane ideas of justice of Hammurabi or his predecessors. It should be recognized that this codification is merely a collection of laws to set standards for the governing of the district to which they applied. It is strictly a civil code; no religious or moral duties are included.

Pentateuch. — Another ancient code is the Pentateuch as contained in the first five books of the Old Testament. The code is particularly confined to the book of Deuteronomy, although the Decalogue is found in the book of Exodus. This code is partly civil, partly religious, and partly moral, there being apparently little or no distinction between these categories. Its purpose was to serve as a standard of civil and religious conduct in the Israelitish community, and it occupied much the same position that a civil code does in a country that has a purely civil government. On the other hand, it seems that the Pentateuch, like custom, bound the conduct of the individual in a more rigorous manner than does a purely civil code of law. Custom enforces itself through the spontaneous disapproval of the community against breaches; whereas law is enforced by definite penalties inflicted for its nonobservance. Most civil law is enforced, fortunately, through the spontaneous disapproval of the community for nonobservance. In some communities, however, there is little public conscience, the penalty or fear of penalty bearing nearly the whole burden of securing enforcement, while in other communities (the tribe of Israel being a good example) public conscience is a strong controlling force.

Code of the Manu. — Another ancient code is the Code of the Manu, which originated in India. This code, including religious, civil, and moral rules, is practically a manual of Brahmanism. The chief topics are: (1) creation; (2) education and the duties of a pupil, or the first order; (3) marriage and the duties of a householder, or the second order; (4) means of subsistence, and personal morality; (5) diet, purification, and the duties of women; (6) the duties of an anchorite and an ascetic, or the duties of the third and fourth orders; (7) government, and the duties of a king and the military caste; (8) judication and law, private and criminal; (9) continuation of the former, and the duties of the commercial and servile castes; (10) mixed castes and the duties of the castes in times of disasters; (11) penance and expiation; (12) and transmigration and final beatitude.

Code of Justinian. — Codification of conduct has been carried on almost entirely for legal purposes in order to make more explicit the legal procedure of a country. The Code of Justinian is the basis of the Roman law. The most celebrated of modern legal codes is the French Code known as the Code of Napoleon. The purpose of such codes is two-fold: (1) to make a unified system of laws to replace heterogeneous systems and (2) to restate in an exact and exhaustive form the common laws of a nation. Modern legal change takes a more definite form in the shape of legislative enactments than the old slow movement of custom. Hence it is comparatively easy to classify legal enactments and build up legal codes for modern states. On the other hand, much law exists today only in the judicial decision, a most inaccessible place, and there is great need for a codification of many phases of civil and criminal law at the present time. Such codification of conduct, however, is valuable mainly for legal purposes.

Franklin's Code. — Only comparatively recently have there been attempts at codifying conduct for educational purposes. The Decalogue, of course, will always stand as a code of personal conduct. Benjamin Franklin, in his autobiography, furnishes another code. In his systematic way, Franklin in 1733 at the age of twenty-seven tried to bring his conduct up to a certain standard which he wished to maintain. He says:

> It was about this time I conceived the bold and arduous project of arriving at *moral perfection.* I wished to live without committing any fault at any time, and to conquer all that either natural inclination, custom, or company might lead me into. As I knew, or thought I knew, what was right and wrong, I did not see why I might not *always* do the one and avoid the other. But I soon found I had undertaken a task of more difficulty than I had imagined. While my attention was taken up, and care employed in guarding against one fault, I was often surprised by another; habit took the advantage of inattention; inclination was sometimes too strong for reason. I concluded, at length, that the mere speculative conviction that it was our interest to be completely virtuous, was not sufficient to prevent our slipping; and that the contrary habits must be broken, and good ones acquired and established, before we can have any dependence on a steady, uniform rectitude of conduct. For this purpose I therefore tried the following method.
>
> In the various enumerations of the moral virtues I had met with in my reading, I found the catalogue more or less numerous, as different writers included more or fewer ideas under the same name. Temperance, for example, was by some confined to eating and drinking, while by others it was extended to mean the moderating of every other pleasure, appetite, inclination, or passion, bodily or mental, even to our avarice or ambition. I proposed to myself, for the sake of clearness, to use rather more names with fewer ideas annexed to each, than a few names and more ideas. I in-

cluded under thirteen names of virtues, all that at that time occurred to me as necessary or desirable; and annexed to each a short precept, which fully expressed the extent I gave to its meaning.

These names of *virtues*, with their precepts, were:

1. *Temperance.* — Eat not to dullness; drink not to elevation.
2. *Silence.* — Speak not but what may benefit others or yourself; avoid trifling conversation.
3. *Order.* — Let all your things have their places; let each part of your business have its time.
4. *Resolution.* — Resolve to perform what you ought; perform without fail what you resolve.
5. *Frugality.* — Make no expense but to do good to others or yourself; that is, waste nothing.
6. *Industry.* — Lose no time; be always employed in something useful; cut off all unnecessary actions.
7. *Sincerity.* — Use no hurtful deceit, think innocently and justly; and, if you speak, speak accordingly.
8. *Justice.* — Wrong none by doing injuries, or omitting the benefits that are your duty.
9. *Moderation.* — Avoid extremes; forbear resenting injuries so much as you think they deserve.
10. *Cleanliness.* — Tolerate no uncleanliness in clothes, body, or habitation.
11. *Tranquillity.*— Be not disturbed at trifles, or at accidents common or unavoidable.
12. *Chastity.*
13. *Humility.* — Imitate Jesus and Socrates.

This list represents both the standards of the times and Franklin's own standards of efficiency.

Mid-nineteenth century writers delighted to list traits in this way and to expound their reasonableness. The writings of Jacob Abbot, Edward Everett Hale, and others abound in such lists.

Code of the Boy Scouts. — A more modern list is that known as "The Scout Law," a code which every boy who joins the Boy Scouts promises to obey. This code was adopted from an earlier code of the English Scouts, but first appeared in practically its present form in the *Official Handbook of the Boy Scouts of America* in 1910.

1. **A Scout is trustworthy.**
A scout's honor is to be trusted. If he were to violate his honor by telling a lie, or by cheating, or by not doing exactly a given task, when trusted on his honor, he may be directed to hand over his scout badge.

2. **A Scout is loyal.**
He is loyal to all to whom loyalty is due: his scout leader, his home, and parents, and country.

3. **A Scout is helpful.**
He must be prepared at any time to save life, help injured persons, and share the home duties. He must *do at least one good turn to somebody every day.*

4. **A Scout is friendly.**
He is a friend to all and a brother to every other scout.

5. **A Scout is courteous.**
He is polite to all, especially to women, children, old people, and the weak and helpless. *He must not take pay for being helpful or courteous.*

6. **A Scout is kind.**
He is a friend to animals. He will not kill nor hurt any living creature needlessly, but will strive to save and protect all harmless life.

7. **A Scout is obedient.**
He obeys his parents, scout master, patrol leader, and all other duly constituted authorities.

8. **A Scout is cheerful.**
He smiles whenever he can. His obedience to orders is prompt and cheery. He never shirks nor grumbles at hardships.

9. **A Scout is thrifty.**
He does not wantonly destroy property. He works faithfully, wastes nothing, and makes the best use of his opportunities. He saves his money so that he may pay his own way, be generous to those in need, and be helpful to worthy objects.
He may work for pay, but must not receive tips for courtesies or good turns.

10. **A Scout is brave.**
He has the courage to face danger in spite of fear, and to stand up for the right against the coaxings of friends or the jeers or threats of enemies, and defeat does not down him.

11. **A Scout is clean.**
He keeps clean in body and thought, stands for clean speech, clean sport, clean habits, and travels with a clean crowd.

12. **A Scout is reverent.**
He is reverent toward God. He is faithful in his religious duties, and respects the convictions of others in matters of custom and religion.

Hutchins' code. — Another code, called "The Children's Morality Code," is by William J. Hutchins, and was selected as the $5000 prize code by the Character Education Institution. This code is printed in the *American Magazine* for April, 1918, and in the *Journal of the National Education Association*, p. 292, November, 1924.

Boys and girls who are good Americans try to become strong and useful, worthy of their nation, that our country may become ever greater and better. Therefore, they obey the laws of right living which the best Americans have always obeyed.

I — The Law of Self-Control

Good Americans Control Themselves

Those who best control themselves can best serve their country.

1. I will control my tongue, and will not allow it to speak mean, vulgar, or profane words. I will think before I speak. I will tell the truth and nothing but the truth.
2. I will control my temper, and will not get angry when people or things displease me. Even when indignant against wrong and contradicting falsehoods, I will keep my self-control.
3. I will control my thoughts, and will not allow a foolish wish to spoil a wise purpose.
4. I will control my actions. I will be careful and thrifty, and insist on doing right.
5. I will not ridicule nor defile the character of another; I will keep my self-respect, and help others to keep theirs.

II — The Law of Good Health

Good Americans Try to Gain and Keep Good Health

The welfare of our country depends upon those who are physically fit for their daily work. Therefore:

1. I will try to take such food, sleep, and exercise as will keep me always in good health.
2. I will keep my clothes, my body, and my mind clean.
3. I will avoid those habits which would harm me, and will make and never break those habits which will help me.
4. I will protect the health of others, and guard their safety as well as my own.
5. I will grow strong and skilful.

III — The Law of Kindness

Good Americans are Kind

In America those who are different must live in the same communities. We are of many different sorts, but we are one great people. Every unkindness hurts the common life, every kindness helps. Therefore:

1. I will be kind in all my thoughts. I will bear no spites or grudges. I will never despise anybody.

2. I will be kind in all my speech. I will never gossip nor will I speak unkindly of anyone. Words may wound or heal.

3. I will be kind in my acts. I will not selfishly insist on having my own way. I will be polite: rude people are not good Americans. I will not make unnecessary trouble for those who work for me, nor forget to be grateful. I will be careful of other people's things. I will do my best to prevent cruelty, and will give help to those who are in need.

IV — The Law of Sportsmanship

Good Americans Play Fair

Strong play increases and trains one's strength and courage. Sportsmanship helps one to be a gentleman, a lady. Therefore:

1. I will not cheat; I will keep the rules, but I will play the game hard, for the fun of the game, to win by strength and skill. If I should not play fair, the loser would lose the fun of the game, the winner would lose his self-respect, and the game itself would become a mean and often cruel business.

2. I will treat my opponents with courtesy, and trust them if they deserve it. I will be friendly.

3. If I play in a group game, I will play, not for my own glory, but for the success of my team.

4. I will be a good loser or a generous winner.

5. And in my work as well as in my play, I will be sportsmanlike — generous, fair, honorable.

V — The Law of Self-Reliance

Good Americans are Self-Reliant

Self-conceit is silly, but self-reliance is necessary to boys and girls who would be strong and useful.

1. I will gladly listen to the advice of older and wiser people; I will reverence the wishes of those who love and care for me, and who know life and me better than I. I will develop independence and wisdom to choose for myself, act for myself, according to what seems right and fair and wise.

2. I will not be afraid of being laughed at when I am right. I will not be afraid of doing right when the crowd does wrong.
3. When in danger, trouble, or pain, I will be brave. A coward does not make a good American.

VI — The Law of Duty

Good Americans Do Their Duty

The shirker and the willing idler live upon others, and burden fellow-citizens with work unfairly. They do not do their share for their country's good.

I will try to find out what my duty is, what I ought to do as a good American, and my duty I will do, whether it is easy or hard. What it is my duty to do I can do.

VII — The Law of Reliability

Good Americans are Reliable

Our country grows great and good as her citizens are able more fully to trust each other. Therefore:

1. I will be honest in every act, and very careful with money. I will not cheat, nor pretend, nor sneak.
2. I will not do wrong in the hope of not being found out. I cannot hide the truth from myself. Nor will I injure the property of others.
3. I will not take without permission what does not belong to me. A thief is a menace to me and others.
4. I will do promptly what I have promised to do. If I have made a foolish promise, I will at once confess my mistake, and I will try to make good any harm which my mistake may have caused. I will so speak and act that people will find it easier to trust each other.

VIII — The Law of Truth

Good Americans are True

1. I will be slow to believe suspicions lest I do injustice; I will avoid hasty opinions lest I be mistaken as to facts.
2. I will hunt for proof, and be accurate as to what I see and hear. I will learn to think, that I may discover new truth.
3. I will stand by the truth regardless of my likes and dislikes, and scorn the temptation to lie for myself or friends, nor will I keep the truth from those who have a right to it.

IX — The Law of Good Workmanship

Good Americans Try to do the Right Thing in the Right Way

The welfare of our country depends upon those who have learned to do in the right way the work that makes civilization possible. Therefore:

1. I will get the best possible education, and learn all that I can as a preparation for the time when I am grown up and at my life work. I will invent and make things better if I can.

2. I will take real interest in work, and will not be satisfied to do slipshod, lazy, and merely passable work. I will form the habit of good work and keep alert; mistakes and blunders cause hardships (sometimes disaster) and spoil success.

3. I will make the right thing in the right way to give it value and beauty, even when no one else sees or praises me. But when I have done my best, I will not envy those who have done better, or have received large reward. Envy spoils the work and the worker.

X — The Law of Team Work

Good Americans Work in Friendly Co-operation with Fellow-Workers

One alone could not build a city or a great railroad. One alone would find it hard to build a bridge. That I may have bread, people have sowed and reaped, people have made plows and threshers, have built mills and mined coal, made stoves and kept stores. As we learn better how to work together, the welfare of our country is advanced.

1. In whatever work I do with others, I will do my part and encourage others to do their part, promptly, quickly.

2. I will help to keep in order the things which we use in our work. When things are out of place, they are often in the way, and sometimes they are hard to find.

3. In all my work with others, I will be cheerful. Cheerlessness depresses all the workers and injures all the work.

4. When I have received money for my work, I will be neither a miser nor a spendthrift. I will save or spend as one of the friendly workers of America.

XI — The Law of Loyalty

Good Americans are Loyal

If our America is to become ever greater and better, her citizens must be loyal, devotedly faithful, in every relation of life; full of courage and regardful of their honor.

1. I will be loyal to my family. In loyalty I will gladly obey my parents or those who are in their place and show them gratitude. I will do my best to help each member of my family to strength and usefulness.

2. I will be loyal to my school. In loyalty I will obey and help other pupils to obey those rules which further the good of all.

3. I will be loyal to my town, my State, my country. In loyalty I will respect and help others to respect their laws and their courts of justice.

4. I will be loyal to humanity. In loyalty I will do my best to help the friendly relations of our country with every other country, and to give to everyone in every land the best possible chance.

If I try simply to be loyal to my family, I may be disloyal to my school. If I try simply to be loyal to my school, I may be disloyal to my town, my State, and my country. If I try simply to be loyal to my town, State, and country, I may be disloyal to humanity. I will try above all things else to be loyal to humanity; then I shall surely be loyal to my country, my State and my town, to my school and to my family.

And those who obey the law of loyalty obey all the other ten laws of The Good American.

Colliers' Code. — *Colliers' Weekly* has published a "Basis for Character Education" including a "Moral Code for Youth" which is reproduced here:

MORAL CODE FOR YOUTH

IN GOD WE TRUST

If I want to be a happy, useful citizen, I must have:

Courage and Hope

I must be brave — This means I must be brave enough and strong enough to control what I think, and what I say and what I do, and I must always be hopeful because hope is power for improvement.

Wisdom

I must act wisely — In school, at home, playing, working, reading or talking, I must learn how to choose the good, and how to avoid the bad.

Industry and Good Habits

I must make my character strong — My character is what I am, if not in the eyes of others, then in the eyes of my own conscience. Good thoughts in my mind will keep out bad thoughts. When I am busy doing good I shall have no time to do evil. I can build my character by training myself in good habits.

Knowledge and Usefulness

I must make my mind strong — The better I know myself, my fellows and the world about me, the happier and more useful I shall be. I must always welcome useful knowledge in school, at home, everywhere.

Truth and Honesty

I must be truthful and honest — I must know what is true in order to do what is right. I must tell the truth without fear. I must be honest in all my dealings and in all my thoughts. Unless I am honest I cannot have self-respect.

Healthfulness and Cleanliness

I must make my body strong — My eyes, my teeth, my heart, my whole body must be healthful so that my mind can work properly. I must keep physically and morally clean.

Helpfulness and Unselfishness

I must use my strength to help others who need help — If I am strong I can help others, I can be kind, I can forgive those who hurt me, and I can help and protect the weak, the suffering, the young and the old, and dumb animals.

Charity

I must love — I must love God, who created not only this earth but also all men of all races, nations, and creeds, who are my brothers. I must love my parents, my home, my neighbors, my country, and be loyal to all these.

Humility and Reverence

I must know that there are always more things to learn — What I may know is small compared to what can be known. I must respect all who have more wisdom than I, and have reverence for all that is good. And I must know how and whom to obey.

Faith and Responsibility

I must do all these things because I am accountable to God and to humanity for how I live and how I can help my fellows, and for the extent to which my fellows may trust and depend upon me.

Brevard's Code. — Still another code, prepared by Caroline M. Brevard, is used by the Character Education Institution of Washington, D. C., as part of its program of high-school character education.

HIGH SCHOOL MORALITY CODE

CAROLINE M. BREVARD

Entering a larger life, undertaking new duties, and preparing for a still larger life and still other duties, learn clearly the law of right, and follow it.

I. *Keeping ever in your heart love and honor for your parents, respect their wishes, be grateful for their care, give them your confidence, and try to enter more and more into their feelings and interests, and to be more and more their help and comfort.*

Keeping in your heart love for your brothers and sisters, always behave so that they will feel sure of you and your love.

Be true to home. Do your part in it and for it, and help with heart and hand to make it the best that it can be.

Through love of your own family, learn consideration and just regard for those not of your family. Doing your duty in your own home, learn to do your duty outside your home.

II. *That you may make the best of life, study diligently, seek knowledge and wisdom.* Be respectful to those whose duty it is to instruct or direct you. Be courteous to all and considerate of all your associates.

Work with a purpose. Work for thorough, accurate knowledge, not for the show of it. Scorn sham and pretense; love truth and seek it. Train yourself to habits of order, accuracy, and regularity; industry, promptness, and perseverance. Learn to appreciate the beauty and wonder of Nature's work and the beauty and wonder of man's work. Keep your mind open and wide awake for new ideas, and never think that you have learned all that you ought to know.

Acknowledge and correct your errors and faults; but do not let thought of them weaken and discourage you. Do not grieve over lost opportunities, but make new ones. Do not grieve over bad habits, but break them. Do not pity yourself. Waste no time in idle dreaming, but with all the strength that is in you labor to bring about the best that you can dream.

Keep before you thought of the work that you believe you can best do in life, and prepare for it as best you can. But never think the work you have to do now is beneath you. Plough the field or build the bridge; bake the bread, or sing the song — do your work so that you make it great.

And first and through all make your will good, strengthen it, and use it.

III. *Be kind, just, and true, in your thoughts, your words, and your deeds.* Do not judge harshly or thoughtlessly. Keep prejudice out of your mind; reverence the life and respect the nature of all. Especially speak the kind word and reach out the kind hand to the sick, the poor, and the sad; and to the young children with so little strength and so little knowledge. Be respectful to and considerate of the old, who have given so largely of their strength. Appreciate what is done for you. Enter into the feelings of others and adapt yourself to circumstances. Never suspect evil, but look for good. Be not a gossip, a meddler, a mischief-maker. Be not over-curious of the business of others. Look for no slights; bear no grudges. Live above spite, malice, jealousy. Give envy, hatred, anger, cruelty, no place in your life. Be loyal and steadfast in all your relations.

Do not look with contempt upon the poor, or think there is shame and disgrace in poverty. Do not look with bitterness upon the rich, or think there must be pride and selfishness in wealth. But appreciate the character and honor, the real worth of all, rich or poor, humble or great.

And bear in mind that your law of kindness is for all creatures that live; so seek not to hurt, but to help; not to kill, but to save.

IV. *Be temperate.* So control desires, will and conduct that you can deny yourself anything, and will deny yourself anything wrong or harmful to yourself or to others.

Learn the laws of nature and obey them. Do those things that will strengthen mind and body and keep them in health, and do nothing that will injure mind or body.

V. *Keep heart, mind, and life pure.* For you there can be no pleasure in coarse songs, jokes, pictures, or anything suggesting impure thought; no part in immodest conversation; no touching what will blacken you. Be neat in appearance and habits; be modest in dress and conduct.

VI. *Be honest and just.* Neither take nor covet what belongs to another. Take no unfair advantage in work or in play. Make no unfair bargain, nor seek to win anything by trick or by chance. To get something yet give nothing, to profit by the work of others, doing nothing in return — these things are not for you. You will pay the fair price and make just return, so do your part.

No more rob or cheat a company or the government than rob or cheat your class mate or your next-door neighbor. Respect public rights and property as you respect private rights and property.

Be faithful to those who trust you or who employ you. No more waste their time nor hurt their interests than waste their money or spoil their possessions. To be perfectly trustworthy, entirely reliable, is your standard.

And be honest with yourself in every thought, and true to yourself and your knowledge of right.

VII. *Do not waste or be careless: but whether you have much or little, use wisely what you have.* Learn to do honest, useful work that will maintain yourself and help others. Avoid extravagance, borrowing, debt. But if you have borrowed, or made a debt, rest not until you have paid it in full.

VIII. *Live the truth and speak it.* Be sincere. Do not lightly promise, for your word must be sure. There can be no evasion, no deception, no double dealing in you.

IX. *Never give way to fear, nor look forward to trouble, but have courage.* Should you meet pain or danger, bear the pain, face the danger, walk the straight road, clear-eyed and unafraid.

Let not your courage wait for the great day with its call for great deeds; use it as well in the plain life of every day, for the commonplace duties close at hand. Have courage to live within your means, to be true to your shabby or unpopular friend. Stand by your convictions, though you stand alone. Speak out for the right, though yours is the only voice that speaks.

X. *Let cheerfulness make finer your strong, true life.* Do not indulge in depressing thoughts; but try to live in gladness and joy, and impart your gladness to others by cheerful looks and words. Find joy in simple things and give joy in simple ways. Be not a grumbling worker, not a grudging giver; but go about your work in cheer and gladness, and let joy and smiles be part of your gift.

XI. *Rely upon yourself.* Look for no favor or patronage, but trust to your own efforts. Do not shrink from what is new and untried; but make the decision, begin the work, take the responsibility. Answer to your own name and stand erect, yourself, not the imitation of another.

XII. *Love and honor your country, holding no work for her too hard, no service for her too great.* Do your part in your community, obeying law, keeping order and peace, helping as well as you can in work for good. Study the laws and government of your country, that with intelligence and judgment you may serve her well. In true loyalty and devotion uphold in your own life the high standard of national character — the standard of good faith, justice, courage, and regard for the general good.

XIII. *Appreciate your influence, and recognize your responsibility.* Do not in any way lead others to do wrong, nor be amused, pleased, or satisfied when they do wrong. All the weight of your character, the influence of what you are, must be on the side of right.

XIV. *Seek to gain wisdom.* Learn to distinguish clearly between what is right and what is wrong, what is true and what is false, what is great and what is little.

With wisdom govern yourself. Learn moderation. Be generous, without being wasteful; courageous, without being reckless; though quick to feel, yet keep a cool head. Be strong, yet gentle; frank, yet courteous; self-respecting, yet not conceited. Delight in play and fun, yet do not live all for play and fun. Love freedom, yet reverence law. Be kind in judgment, yet make no compromise between right and wrong. Wear with true dignity your silken gown or your scholar's robe, as you wear with true dignity your working clothes. Value the tradition of days that are past, yet with all the strength that is in you go forward into the future and make it good.

Keep before you your standard of character, and follow your law of right. Be just. Be kind. Have courage. Keep your word true, and your honor unstained. Control your thoughts, you will, and your conduct. Seek to grow in wisdom as the days pass.

Special codes of conduct. — A treatment of conduct codes should not be dismissed without mentioning the numerous partial codes that we now have. These will be referred to at greater length in the next chapter. They are of two sorts: (1) codes of narrow fields of activity, but generally or universally applicable and (2) codes of broad activity but applicable to narrow or special groups.

In the first category there are the numerous codes of health. One of the most famous is the code of Professor Irving Fisher published in a booklet *How to Live Long.*[1] This is a code of fifteen short rules of health. Another similar valuable code is that of Dr. Thomas D. Wood, a list of ten rules for health conduct called "Ten Golden Rules of Health for School-Children," published in *Health Essentials for Rural School-Children.*

Along this same line may be mentioned the lists of rules for safety.

In the field of thrift there are a number of codes or sets of rules. These may be conveniently found in a series of bulletins on thrift published by the United States Treasury Department to encourage thriftiness of all sorts during the World War. Again, there are rules for efficient study, the most famous of these being found in Whipple's *How to Study Effectively.*[2]

In the matter of etiquette, numerous books have been published during recent years giving rules and standards of etiquette, and while I am not aware that these rules have been codified in tabular form they are "written up" and are available for purposes of education. The most popular of these books has been Emily Post's *Etiquette.*[1]

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[1] FISHER, I.: *How to Live Long.* Metropolitan Life Insurance Company, New York.

[2] WHIPPLE, G. M.: *How to Study Effectively.* Public School Publishing Company, Bloomington, Illinois, 1916.

In the second category there are codes governing special groups, especially professional or occupational groups. Doctors and lawyers have long had canons of ethical conduct, many of which have been tacitly understood. Recently with the diversification and specialization of occupations many groups have discovered that they have special ethical obligations and duties which should govern their professional conduct as distinguished from general conduct. A "group consciousness" based on occupations has grown up. This has resulted in codes of ethics for various professions and occupations, codes which deserve a prominent place in vocational or professional education. Many of these codes have recently been collected by E. L. Heermance and published in book form under the title of *Codes of Ethics.*[2]

Conduct codes too general. — Conduct codes have been unsatisfactory for the purposes of education for several reasons, one being that they have been too general in their categories. Benjamin Franklin recognized this fault when he wrote, "I proposed to myself, for the sake of clearness, to use rather more names, with fewer ideas annexed to each, than a few names and more ideas." Conduct codes in general have erred in using categories so general as to be relatively valueless. The qualities or traits listed are too general and give little assistance to an individual or teacher in knowing what habits are desirable or how to go about acquiring or building them. Take, for example, "self-reliance" in the Hutchins' code. The mere word self-reliance has little meaning for the boy or girl until it is associated with some concrete experience in conduct. It gains meaning haphazardly as parent, teacher, or friend calls this or that person self-reliant, or this or that an act of self-reliance. However, Hutchins makes his code more definite than the mere word. Here is his whole statement concerning self-reliance:

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[1] POST, EMILY: *Etiquette.* Funk and Wagnalls Company, New York.

[2] HEERMANCE, E. L.: *Codes of Ethics.* Free Press Printing Co., Burlington, 1924

The Good American is Self-Reliant

Self-conceit is silly, but self-reliance is necessary to boys and girls who would be strong and useful.

1. I will gladly listen to the advice of older and wiser people, but I will learn to think for myself, choose for myself, act for myself.
2. I will not be afraid of being laughed at.
3. I will not be afraid of doing right when the crowd does wrong.

Now the matter is more definite, but is it definite enough? "I will learn to think for myself." This means of course that the boy is to make his own decisions, reach his own conclusions without calling on father or mother, sister or brother. It is always a question whether a boy or a girl can take such a generalization and apply it to the specific situation. Perhaps it is a matter of deciding when to study, or how much to spend for a baseball, or whether to accept the invitation to a party. The boy who says "I will learn to think for myself" must do more than *will* — he must know when he is expected to think and make decisions, and he must form the habit of so doing rather than rely on the judgment and advice of others. Can the average boy do this alone? Usually he needs the coöperation of others. If he is to learn to make his own decisions, his parents must not make them for him. His parents also must recognize the situations where they must refrain from suggesting what the boy is to do. "I will learn to act for myself." Does this mean "I will shine my own shoes rather than pay to have them shined; I will carry my own suitcase rather than have the porter carry it; I will do my own lessons rather than obtain help from my friend"; or does it mean something else? Does the boy or girl for whom this code is intended know what it means? It is the very superior boy who, starting out in the morning with the glow of a resolve to be self-reliant, can recognize the many situations he meets during the day where self-reliance applies, if such situations go contrary to his habits and the *mores* of home and school.

This criticism can be extended to other items in any of these codes with the same result; they are all general and indefinite. The makers of these codes had in mind only vaguely how they were to be used. It has always been the fashion to codify, to make rules for others, to build up generalizations. Quite possibly these codes were to be used as ideals — catchwords to be carried around in the mind as controls of conduct. But if these catchwords are to be effective as ideals, it is only in proportion both to one's past experience with these words when associated with acts whose meaning they convey and to the intelligence of the person holding them as ideals.

In the experiments carried out by Voelker[1] in developing trustworthiness, there was, to be sure, a transfer of trustworthiness to acts which probably had never been associated with trustworthiness before in the minds of the boys. The experiments showed that holding the Scout Laws as ideals actually did cause a larger increase in trustworthiness in these acts than occurred in groups which had not had the scout training. The leader of one of the Scout troops used in the experiment, reports that he endeavored to develop trustworthiness in the Scouts in the following ways:

1. By repeated suggestions as to the importance and significance of the Scout Oath and Law, and of the value of living up to them.
2. By specifically emphasizing to them the law stating "A Scout is Trustworthy."
3. On February 13th, I told a story in which one man was trustworthy and another was not.
4. Later in the same day I cautioned them to be trustworthy in a game which they were playing.
5. On March 12th, in speaking of plans for a hike, I emphasized the importance of trustworthiness on the hike.

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[1] Voelker, P. F.: *Function of Ideals and Attitudes in Social Education*, Teachers College Contributions to Education, No. 112, 1921.

6. On April 9th, I complimented a boy on a report received from another scout official that he had been trustworthy in performance of assigned duties.
7. On or about April 20th, in writing to the Scouts urging them to attend their second examination, I wrote out to the Scouts, stating that I had given my word that each of the boys would be present, and charging each boy on his Scout Honor to be present, unless circumstances beyond control prevented it.

It is very likely that the concept of trustworthiness was fairly well formed as a result of these several incidents, and that the strong commendation given to trustworthy acts set it up as an ideal of conduct, but it is also likely that, as a naked idea without training, it would have had little effect on conduct.

The movement now under way of inventorying the habits of young children is a step in the direction of greater specificness. This newer type of code implies a different conception of the education of conduct. Conduct education in the past has been *self-education.* Codes for this purpose must be short and inclusive so that they may be readily grasped and remembered. The older method of conduct education began by preaching, and after the individual had been supplied with the right incentives and ideals he was sent away to put them into practice. The Decalogue has been memorized by thousands. Every Boy Scout must be able to repeat *verbatim* the Scout Laws. But the newer methods of conduct education are based on social control. Habits are built up in an individual by the appropriate situation, especially the social situation, including approval and disapproval. This does not, of course, prevent ideo-motor control; and while ideo-motor control is not basic, it is hoped that it will become an important form of control for those who are able to employ it. But education by external stimulation is fundamental. For this reason we no longer need codes that may be easily memorized and carried around as catchwords. We are ready now to put into use codes which are more analytic and more comprehensive.

Conduct codes too ambitious. — A second criticism of conduct codes that we have had in the past is that they overshoot the mark of practical attainment. It is true that we expect certain habits to work with 100% accuracy. Honesty with respect to other people's property, sex taboos, and laws with respect to killing we must have obeyed with absolute uniformity. The penalties for transgressions of these rules are severe, and society takes pains to impress the standards constantly. The church has had a large share in forming these controls in the past, but with the breakdown of religious authority, we are now in a period of transition when society has not seen the necessity of forming these habits on the basis of secular controls. Our conduct codes in the past have been constructed throughout on a hypothesis of perfectionism. Take, for instance, the following from Benjamin Franklin's code:

> *Industry.* — Lose no time; be always employed in something useful; cut off all unnecessary actions.

Possibly that was a worthy ideal for Franklin, because he was capable of approximating it. It may be that some such ideal as that was instrumental in his achieving the success that was his. But granted that most of us could employ our time more effectively than we do, it would be an impossible standard to set up for the vast majority of workers — farmers, bakers, engineers, bookkeepers. We need to bring our standards of conduct down out of the skies to fit the needs of actual men and women under all sorts of circumstances. The writer does not know how frequent a phenomenon the "moral holiday" is, but there is much empirical evidence to testify to the fact that under a too rigorously applied code of conduct, however just or however scientifically validated, certain fundamental trends or impulses are denied expression. Life would become all routine were conduct entirely prescribed. As Edward W. Bok humorously describes it:

> I confess I had at one time some six or seven of these early morning diversions prescribed by doctors, dentists, aurists, and oculists, until I found myself taking from an hour to an hour and a half to dress, with each diversion deemed more "important" than any other by the prescriber! I never tried the twelve daily lessons set to music, because, while I may be peculiar,

I prefer my music without exercise at the same time. But I did try to raise myself up from the floor by lifting the abdominal muscles only; to stand on my head and wave my feet rhythmically in the air; to shape the circle of my hands like a cup over my ears twenty times and pull the hands away quickly; to take twenty-five deep breaths standing before an open window; and to stretch my abdomen thirty times. In addition to this, I learned to eat two raw eggs before breakfast, to drink eight glasses of water while dressing, and to run floss through the crevices between my teeth. As a result of these exercises I found a day's work, if I were nimble, beginning at eleven o'clock in the morning! And I was pretty tired when I began![1]

Conduct codes unanalytical. — A third criticism of traditional conduct codes is that they have failed to see the steps necessary in the educative process and have stressed simply the end result. Here again the psychological concept of conduct is faulty. It is assumed that any trait such as trustworthiness may be achieved at a single leap. That trustworthiness is merely an end result, a consolidation of many simpler *acts* which are trustworthy has been overlooked. This fact is brought out well in an anecdote told by Goddard. "A feebleminded child of a mentality of seven or eight steals a handkerchief and gives it to somebody she likes very much. She is caught and corrected, told that it is stealing and is wrong. It is highly probably that she will never steal a handkerchief from that person again; but is quite possible that she will steal something else from that same person or will steal a handkerchief from somebody else."[2] Such a child must be taught every specific habit of conduct.

Conduct codes neglect overt habits. — A fourth criticism of our traditional conduct codes is that they have neglected some of the overt habits that should have been established and have overemphasized certain traits or generalized habits. In Hobhouse's *Morals in Evolution*,[3] I find an entirely different set of topics discussed from those one would expect in reading over lists comprised of such words as "self-control," "self-reliance," "kindness," "reliability," etc. On the contrary I find discussed therein marriage and the position of women, the relation of one community to another, the relation of the members of one class in society to another, the questions of property and poverty. Now a conduct code based on such topics as these would be much more difficult to write. Such a code could not deal with platitudes regarding self-control, self-reliance, clean play, and the like, but would have to establish definite rules of conduct in everyday situations. Right here is where education for character has failed; it has not attacked the real problems of conduct. But such things as property and marriage and the conduct between classes and communities are the problems with which education should be most concerned. There are no more important habits or ideals that education can give a boy or girl than those concerned with right conduct along these lines. Our conduct codes fail because they deal with indefinite aspects of conduct. It is easier to construct codes based on vague generalities, but such codes are comparatively ineffective and useless.

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[1] Bok, E. W.: "The Worst Birthday in a Man's Life," *The Atlantic Monthly*, October, 1924.

[2] Goddard, H. H.: *Psychology of the Normal and Subnormal*, p. 295. Dodd Mead and Company, 1919.

[3] Hobhouse, L. T.: *Morals in Evolution*. Henry Holt and Company, 1906.

Conduct codes imperfectly validated. — Finally, conduct codes have failed because they are imperfectly validated. The number of really valid habits, especially in the social area, is comparatively small. We do not know the specific habits of social living which make for true social health, as we know some of the laws of hygiene which make for physical health. We only know that certain very general habits, aspects of all conduct activity, are of general validity. I refer to such traits as trustworthiness, truthfulness, loyalty. But these must be based, in the first instance, on the more specific habits which perhaps lack the full validity. It is impossible to make the direct leap to the more general habits such as trustworthiness, without first traversing the field of the more specific habits.

The Upton-Chassell Scale. — The movement to give a more detailed formulation of the objectives of conduct education is evidenced by the code prepared by Upton and Chassell as published in the *Teachers College Record* of January, 1919. The list is called "A Scale for Measuring the Importance of Habits of Good Citizenship." It contains 187 separate habits or acts of conduct under twenty-four rubrics or captions. This list indicates the trend that is being followed for the purposes of education. Instead of listing general traits or qualities, an endeavor is made to list separate acts or habits which would exemplify more general traits.

HABITS AND ATTITUDES DESIRABLE FOR GOOD CITIZENSHIP IN THE ELEMENTARY SCHOOL

The Good Citizen:

Takes Care of His Health

7* Plans his daily program so that there may be a healthful balance between work and outdoor activities.
7 Is cleanly in habits, person, and dress.
6 Carries out directions of school and family physician.
5 Reports symptoms of illness promptly.
5 Spends in sleep, in a well-ventilated room, the number of hours prescribed for one of his age.
5 Is careful of his eyes, not reading in a dim light or when lying down; taking care that the sun does not shine on the page, and that the light comes over the left shoulder when he is working or reading; and keeping the book or the paper at a proper distance (about fourteen inches) from the eyes.
5 Orders well-balanced luncheons suited to his needs.
5 Avoids getting wet, getting chilled, or cooling off too suddenly after play.
4 Washes hands before eating.
4 Takes a sufficient amount of time to eat properly.
4 Does not indulge in sweets to a harmful extent.
4 Keeps hands and materials away from mouth, and fingers away from nose and ears.

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* The number at the left of each item represents the group to which it was assigned by 74 judges, 10 representing the most important items, 9 those next in importance, etc;

KEEPS A GOOD POSTURE

4 Holds head easily erect and chest high, even when working at a desk.
3 Walks with a light step resulting from a feeling of "uplift" throughout the body.
2 Holds book in correct position.

IS ORDERLY

5 Is neat in dress.
4 Puts away apparatus or materials when through with them.
4 Keeps desk, table, and locker in good order.
3 Has a good arrangement of materials on desk or table, especially during the industrial or fine arts lessons.

EXERCISES THRIFT

8 Concentrates upon the task at hand.
7 Uses leisure time to good advantage.
6 Is economical in the expenditure of money for lunch and other personal necessities, and refrains from extravagances.
5 Anticipates his needs and does not borrow.
5 Employs the most efficient methods of work, such as the use of short cuts in arithmetic.
5 Saves time by having a consciousness of the daily schedule, preparing for the work of the next period when that of the preceding one has been completed.
5 Is systematic in saving money.
5 Does not waste paper, pencils, paints, and other materials.
4 Keeps books and apparatus in good condition.

IS PROMPT

6 Does not procrastinate.
6 Comes to school on time.
5 Hands work in on time, including home assignments.
4 Responds instantly to signals.
3 Passes and collects materials promptly.
2 Puts work away quickly.
1 Puts on or removes wraps quickly.
1 Puts on or takes off gymnasium shoes in three minutes or less.

THINKS CLEARLY AND PURPOSEFULLY

8 Sees details in their relation to the whole and selects essential points.
7 Finds possible solutions for problems.
7 Senses difficulties in lesson or project, and locates and defines them accurately.

7 Verifies tentative conclusions on the basis of further observation and experimentation.
7 Expresses himself coherently and clearly.
6 Considers carefully the bearings of replies and suggestions made in answer to questions or problems.
6 Explains lesson in his own words.

HAS A SENSE OF HUMOR

6 Sees the amusing side of a bad situation.
6 Enjoys a joke, even at his own expense.

IS REFINED

7 Does not intrude on another person's privacy or time.
6 Is free from coarseness or crudities in speech and manner.
6 Is not self-conscious in well-doing.
6 Is pleasing in personality.
5 Is unassuming.

IS CHARACTERIZED BY HELPFUL INITIATIVE

9 Finds ways of adapting his own work or play to the good of the group.
8 Directs the activities of the group toward useful ends, but does not 'boss.'
8 Seeks intelligently opportunities for serving others.
8 Finds ways and means of improving his weak points.
7 Engages in free experimentation with a useful purpose in mind.
7 Seeks information by asking questions, by observation, and by other methods.
7 Formulates projects.
7 Is resourceful in finding new tasks when those assigned have been finished.
6 Makes or otherwise provides such apparatus and materials as are needed for carrying out his project.
6 Is ready with helpful suggestions as to better ways of doing things.
5 Volunteers in the recitation.

IS SELF-RELIANT

8 Thinks, chooses, and acts independently; but realizes when help from other sources is desirable.
6 Performs such duties as are within his power, including self-help, as tying, buttoning, finding his way, telling time, and supplying simple needs.
4 Speaks without shyness and in a direct manner.

EXERCISES SELF-CONTROL

9 Does not indulge in injurious or debasing practices.
8 Is cheerful.
7 Is agreeable when he can not have his own way.
7 Is pleasant in a difficult situation, as, for instance, when some one else is cross.
7 Keeps his temper.
7 Submits gracefully to an unavoidable injury or loss.
6 Does not sulk or answer back when reproved.
6 Does not worry.
6 Does not quarrel.
4 Does not cry or complain over trivial things.

LIVES UP TO THE TRADITIONS OF GOOD SPORTSMANSHIP

9 Works for his team rather than for himself.
8 Follows the rules of the game scrupulously.
8 Is courteous to opponents.
7 Is a good loser.
7 Treats the members of a visiting team with hospitality.
6 Accepts victory unostentatiously.
6 Attains the best of 'form.'

STANDS FOR FAIR PLAY

9 Stands for fairness in games or arguments.
9 Protests against any one's taking advantage of the weak, stammerers, cripples, or other unfortunate persons.
8 Defends absent persons who are unjustly attacked.
7 Does not let another pupil make wrong use of his work, such as copying from his examination or home-work papers.
7 Claims no more than his fair share of time and attention, particularly in the recitation period.
6 Does not expect special favors or privileges.

IS COURAGEOUS

9 Confesses wrongdoing and mistakes, and makes such reparation as are within his power.
9 Perseveres in spite of failure.
8 Approaches difficult tasks resolutely.
8 Tries to do his best even when the task is disagreeable or praise is not forthcoming.
8 Makes the best of his misfortunes and takes disappointments bravely.
7 Is not cowardly when unjustly attacked.
4 Endures pain without flinching.
4 Accepts no 'dares' of a foolhardy nature.

Is Honest and Truthful

10 Tells the truth without flinching or compromise, trying to give a correct impression.
9 Faces facts squarely and does not allow himself to be misled by prejudices.
9 Does not take the property of others without their consent.
9 Does not copy another person's work.
8 Endeavors to restore lost property to the rightful owner.
6 Does home work entirely himself, or with only such help as is designated by the teacher.
5 Makes a straightforward recitation.
5 Avoids exaggerations.
4 Does not pose.

Is Trustworthy

8 Keeps appointments and other agreements.
8 Guards confidences, provided his principles are not violated by so doing.
7 Takes care not to promise more than he can fulfill.
7 Returns promptly and in good condition articles loaned to him by another.
6 Reads assigned work whether he is to be questioned on it or not.
6 Assumes responsibility for making up work after an absence.
6 Is quiet and orderly when the teacher is not in the room.
5 Performs errands satisfactorily.

Has a Sense of Civic Responsibility

10 Supports the right and opposes the wrong whenever occasion arises.
9 Considers candidates from the standpoint of the qualities essential for leadership, and elects a person for no other reason than his fitness for the position.
9 Holds to what he thinks is right, unmindful of ridicule or other unpleasant consequences to himelf.
9 Studies civic problems and the needs of the community.
9 Conforms to the will of the majority, as in the case of following a chosen leader, provided no principles are violated by so doing.
9 Makes the most of his opportunities.
8 Assumes responsibility to report wrongdoing through authorized channels, if a friendly protest to the offender has not resulted in effort to rectify the wrong; but distinguishes carefully between tattling and voicing an honest protest against dishonesty, unfairness, cruelty, and the like.
8 Assists heartily in measures to prevent the spread of disease and sickness, such as taking care in case of colds.

7 Expresses a preference when he can support it with valid reasons, especially when some issue is at stake.
7 Assumes willingly school and class duties and obligations, such as holding class offices and serving on committees.
7 Takes pride in the appearance of school property, doing his part to keep the cloak-room in order; picking up paper from floor and stairs; and taking pains not to throw orange-peel or other refuse on street or playground, or to deface desks, books, pictures, walls, woodwork, etc.

Is OBEDIENT
6 Responds to directions or requests from those in authority, without engaging in unnecessary discussion.
5 Conforms to the rules governing the study period.
5 Observes all fire-drill regulations.
4 Keeps regulations relating to the recess period.
2 Does not run in the halls

Is GENEROUS
9 Shows a spirit of helpfulness and service to others, whether in work or play.
8 Forgives wrongdoing in others, even when it has occasioned personal loss or annoyance.
8 Takes pleasure in the success of others.
8 Gives time and money to worthy causes.
7 Shares good times with others whenever possible.
7 Gives praise where praise is merited.

Is COURTEOUS AND CONSIDERATE
8 Is tactful, avoiding saying or doing that which would unnecessarily pain or annoy another.
8 Does not make disparaging remarks or sneer and laugh at others.
8 Is reverent in attitude during prayer, or at least does not disturb the devotions of others.
7 Is chivalrous to women and girls (if a girl, acknowledges acts of chivalry pleasantly).
7 Is attentive when some one else is talking, whether it be another pupil, a teacher, a visitor, or a speaker in a public place.
6 Is thoughtful in making requests of others, including helpers.
6 Remembers by letters or inquiries those who are sick.
6 Is painstaking in directing strangers and others.
6 Is pleasant in greeting, and (if a boy) raises his hat or cap.
6 Does not interrupt others needlessly.
6 Gives up his seat in crowded places to older persons.

5 Avoids whispering when it will annoy others.
5 Acknowledges favors graciously.
5 Avoids abruptness of speech when addressing a person or replying to a question.
4 Waits quietly in turn for some privilege, such as sharpening a pencil.
4 Allows pupils in front of him or older persons to pass through doorways or into the elevator first.
4 Laughs and talks quietly.
4 Is mannerly at lunch.
4 Avoids passing in front of others.
4 Opens door for others.
4 Offers book to visitors or to others who have none.
3 Picks up something dropped by another.
3 Closes door or desk quietly, and uses pencils and other articles without making unnecessary noise.

Is Coöperative

9 Gives up his own preferences when they interfere with the good of the group.
8 Participates with a keen interest in group activities and school enterprises.
8 Gives proper criticism in a courteous manner, and accepts suggestions from others and profits by them.
7 Helps to carry out worthwhile suggestions made by others.
6 Enjoys working and playing with others.
4 Takes his place in line quickly and quietly, and does his part to keep the line in good formation.
2 Turns to the right in passing people.

Is Broadminded

10 Is democratic.
10 Appreciates other nations and races and their contributions.
9 Respects all forms of religion and belief.
8 Is sympathetic with the opinions of others, including those who differ with him.

Is Loyal

10 Is unswerving in devotion and faithful in service to his country, but does not render blind allegiance.
9 Is true to family and friends.
9 Respects those in authority, including parents and teachers, and is faithful to them.
9 Takes pride in his group and in the school, and tries to foster the right kind of spirit.

8 Has faith in others.
8 Observes such expressions of loyalty as removing his hat when the flag is presented or when the national anthem is sung.
7 Regards elderly people with deference.
7 Honors those who have rendered distinguished service.

HAS A FINE SENSE OF APPRECIATION AND SEEKS TO EXPRESS IT

10 Recognizes moral purpose in the universe, and reverences a Higher Power.
10 Appreciates the priceless value of personality, and tries to give opportunities for its highest attainment in others.
10 Subordinates his own will to the larger purposes and ideals of life.
9 Values fine traits of character, and chooses good associates.
9 Weighs values, perceives their varying worth, and chooses those of greatest significance.
8 Forms worthwhile purposes and strives to carry them out.
8 Craves real merit rather than external distinction.
8 Appreciates mastery in intellectual lines, and strives for thoroughness and accuracy in his own work.
8 Has a high standard of workmanship and tries to measure up to it.
8 Appreciates the motive prompting expressions of kindness and love, as well as the act itself; and tries to make known his appreciation to the persons concerned.
6 Enjoys the beautiful in art and nature.

Recent attempts at a more thorough analysis of conduct. — The movement toward breaking conduct up into separate habits has gained considerable headway since the Upton-Chassell list was published. Moreover, a definite technique for compiling such lists has been devised. The Upton-Chassell list was merely the codification of adult opinions checked to a slight extent by fortuitous observation of children in school. Later Dr. Agnes Rogers, with others, by definite and systematic observation collected a list of habits to be formed in school children of five and six years old. These lists were published as a *Teachers College Bulletin*, Fourteenth Series, No. 4, Oct. 21, 1922, and were called "A Tentative Inventory of Habits." The habits were classified under five headings: health habits, personal habits, social-moral habits, intellectual habits, and motor skills.

Andrus inventory of habits of children. — Following this work the habits of children two years old were inventoried, Dr. Ruth Andrus finally becoming responsible for the work, although observers coöperated. The observation was carried on at the Manhattanville Day Nursery School, New York City.[1] This inventory was classified under the following headings:

A. Emotional Habits

I. Homesickness
II. Pugnacity
III. Anger
IV. Fear
V. Aesthetic Appreciation
VI. Happiness
VII. Fun Sense
VIII. Docility — Timidity
IX. Respect — Reverence
X. Likes — Dislikes
XI. Appetite
XII. Miscellaneous Habits
XIII. Wonder
XIV. Jealousy

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[1] This inventory was published as a *Teachers College Bulletin*, Fifteenth Series, No. 3. October 6, 1923, under the title "A Tentative Inventory of the Habits of Children Two Years Old." It was expanded to include children two, three, and four years old during the fall of 1923. Fifty-two children were studied for a period of five weeks in four nursery schools in New York City. The observation was carried on by a class of sixty-nine students in Kindergarten-primary education at Teachers College. This work was published as a *Teachers College Bulletin*, Sixteenth Series, No. 3, October 11, 1924, and is called "A Tentative Inventory of Habits of Children from Two to Four Years of Age." Dr. Andrus has put this last work into more complete form in her monograph *A Tentative Inventory of the Habits of Children from Two to Four Years of Age.* Teachers College Contributions to Education, No. 160. This final revised form of the inventory comprises four divisions made up of the following number of items:

Divisions	Number of Items
Emotional	336
Mental	339
Motor	336
Social-Motor	219

B. **Mental Habits**
  - I. Attention
  - II. Perception
  - III. Curiosity
  - IV. Purpose — Plan
  - V. Development of Vocabulary
  - VI. Memory

C. **Motor Habits**
  - I. Feeding Habits
  - II. Toilet Habits
    - *a.* Urination and defecation
    - *b.* Washing
    - *c.* Dressing
  - III. Habits of Play — Work
  - IV. Health Habits

D. **Social-Moral Habits**
  - I. Coöperation
  - II. Friendliness
  - III. Independence
  - IV. Imitation
  - V. Obedience
  - VI. Self-Control
  - VII. Politeness and Courtesy
  - VIII. Truthfulness
  - IX. Approval of Others
  - X. Responsibility

A description of this movement would not be complete without reference to the *Conduct Curriculum for the Kindergarten and First Grade*,[1] a book published under the editorship of Professor Patty S. Hill. This is an ambitious attempt to analyze the curriculum of the kindergarten and first grade in terms of activities and outcomes. This small but suggestive volume shows how analyzed conduct may be made the objective of education.

Charters' analyses of honesty. — The work of providing more adequate and detailed statements of the objectives of conduct education is proceeding apace. W. W. Charters in his *The*

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[1] Hill, Patty S. (Editor): *Conduct Curriculum for the Kindergarten and First Grade.* Charles Scribner's Sons, 1923.

Teaching of Ideals[1] shows how honesty can be broken up into several hundred specific "trait actions." This work is very significant and suggestive.

HONESTY SITUATIONS[2]

I. MONEY.

1. **You borrow money.**
   - *a.* You promise to give it back when you get it, and you get it the next day.
   - *b.* Someone says, "I know I owe you some money, but I have forgotten how much."
   - *c.* You can borrow for a time from brother's little bank or from a treasury fund in your keeping, and no one need know about it.
   - *d.* You borrow small sums for car-fare or a "movie" ticket. When you say that you will pay it back, they say, "Never mind; that's all right."
   - *e.* You borrow money, and later the lender and you disagree as to the amount.
2. **You find money.**
   - *a.* You know to whom it belongs.
   - *b.* You do not know to whom it belongs.
   - *c.* You know that you will get a reward for returning it.
   - *d.* You know that you will not get a reward for returning it.
   - *e.* You find money on your desk.
   - *f.* You see money lying about your home.
   - *g.* You hear money jingle in the pockets of wraps belonging to other people as you hang up your coat.
3. **Money is given to you for a specific purpose.**
   - *a.* You collect money for school activities.
   - *b.* You are treasurer of a club or organization.
   - *c.* You are purchasing things for another.
   - *d.* You purchase something for someone else, and there is change.
   - *e.* You collect money for a certain project, and there is a surplus.
   - *f.* You are given money for the school bank; on your way to school there is an opportunity to spend it.
   - *g.* You take gate receipts when tickets are not used.
   - *h.* You take subscriptions for a magazine and lose the money.
   - *i.* You sell tickets, and the money is stolen.

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[1] CHARTERS, W. W.: *The Teaching of Ideals.* The Macmillan Company, 1927.

[2] CHARTERS, W. W.: "Ideals, Situations, and Trait Actions, I," *Elementary School Journal,* XXV: 424–436. February, 1925.

j. Your mother gives you money for lunch, and you see an attractive display of candy in the window.
k. You are given money to buy fruit or flowers for someone who is sick.
l. You are given money for Sunday school, and the collection is taken before you arrive.
m. You are asked by a playmate to keep some money for him, and he fails to ask for it.

4. **You have something to sell.**
   a. You sell to children who cannot make change.
   b. You discover that you have given a customer too little in change.

5. **You are buying.**
   a. You discover that you have received too much in change.
   b. You have a chance to pass foreign money when you know that it is not the custom to use it.
   c. You have in your possession a defective coin.
   d. You want to buy some candy at the grocery; the grocer will charge it, but you do not have your mother's permission.
   e. In buying groceries the clerk will give you candy and add the extra amount to the potato item.
   f. You wish to enter a place of amusement, and the gate-keeper is not in sight.
   g. You buy a paper when the boy is away from the stand.
   h. You want to use a public telephone, and a slug which you have will get results.
   i. Discounts are given to the school; in a personal purchase, you can get a discount if the seller thinks it is for the school.
   j. When purchasing for the school, you are offered a commission.

6. **You are traveling.**
   a. You ride on a street-car or train, and your fare is not taken.
   b. You board a street-car in a crowd, and a penny will do as well as a check.
   c. You are starting on a long trip and have just passed the legal age for half-fare.
   d. You have a railroad ticket the date of which has expired.

7. **Fines are levied against you.**
   a. You have violated the rules of your club and are subject to a fine, but no one knows it.
   b. You are fined for keeping books out of the library too long, and you do not want to pay.
   c. You have kept a book out of the library so long that the fine is more than the book is worth.

8. **You are keeping accounts.**
   - *a.* You are handling school money and must give a statement of receipts and expenditures.
   - *b.* You must account for the expenditure of your allowance.
   - *c.* You are allowed money only for necessary expenses, and you can get some for recreation by "padding" your expense account.

9. **Miscellaneous.**
   - *a.* You are out on school business at school expense.
   - *b.* You subscribe to a cause under strong enthusiasm, but when it comes time to pay, your enthusiasm has waned.
   - *c.* You have some money which you are supposed to divide among your playmates.
   - *d.* Your assessment for school dues is stated as less than it should be, and you know it.
   - *e.* Someone asks you to bet.
   - *f.* Someone wants to pay you for doing something that you know you ought not to do.
   - *g.* All pupils are supposed to pay five cents to use the telephone; no one is in the office when you make a call.
   - *h.* You are obligated to pay your share of a certain purchase and you do not have the money.

II. PROPERTY.

1. **You borrow property.**
   - *a.* You borrow a book or an umbrella.
   - *b.* You borrow a book or an umbrella and lose it.
   - *c.* You borrow a book or a tool and damage it.

2. **You are using property that does not belong to you.**
   - *a.* You accidentally break a window at school and no one sees you.
   - *b.* You carelessly mar the furniture of the school.
   - *c.* A group destroys the property of another, and all except yourself do not want to replace it.
   - *d.* You are eating at a restaurant and want some of the silver for a souvenir.
   - *e.* You are stopping at a hotel where an abundance of stationery and towels is provided.
   - *f.* You are on a street-car or a train, and you are requested to keep your feet off the seats.
   - *g.* You see another injure the property of the school, and he does not confess.
   - *h.* Through carelessness, you break laboratory equipment, but you can give the impression that it was defective.

3. **You find property.**
   - *a.* You find a book with no name in it.
   - *b.* A handkerchief is left on your desk.
   - *c.* Some athletic equipment is left on the playground.
   - *d.* A pencil or fountain pen is found in the school, and no one asks for it.

4. **You have access to the property of others.**
   - *a.* You pass close to fruit trees on your way to school.
   - *b.* Fruits and candies are lying open before you in the stores.
   - *c.* Your mother has just enough fruit or cake for dinner, and you are hungry after school.
   - *d.* You have an opportunity to take some coveted article from a teacher or a fellow-pupil.
   - *e.* You play marbles for "keeps" and win all of the marbles belonging to a smaller boy.
   - *f.* You have lost your book, and you can take another pupil's book without detection.
   - *g.* You have access to school stationery and supplies and want some for personal use.
   - *h.* You have used or wasted your laboratory materials and have access to those of a fellow-pupil who is absent.
   - *i.* You want chalk to play fox and geese, and you can get it at school.
   - *j.* The school supplies you with certain materials as you need them, and no one keeps account of how much you use.
   - *k.* You can exchange your materials for those of another pupil which are in better condition.
   - *l.* You think that you can use the property of another without his knowing it.
   - *m.* You want to hunt or fish where trespassing is forbidden, and you know the owner is away.
   - *n.* On your way to school you pass a bed of flowers your teacher especially likes.

5. **You are thoughtless about the property of others.**
   - *a.* A neighbor's well-kept lawn offers a short cut to school.
   - *b.* A neighbor's dog or chickens wander into your yard.
   - *c.* You like to handle goldfish; there is a bowl in the schoolroom, and you are alone.
   - *d.* Your ball goes into a yard surrounded by a beautiful hedge, and the gate seems a long way off.
   - *e.* You are picnicking, and wood from a fence is the best wood for a fire.

f. You damage an article in a store while you are examining it.
g. In hanging up your wraps, you knock down the coat of another person.
h. You want a songbook from the church in which you worship.
i. You put on by mistake the rubbers of another person and wear them home; you find that they are better than yours.
j. You have a new knife, and you want to try it out; fences, doors, desks, and trees present an attractive surface.

6. **You are selling property.**

a. You can hide certain defects so that they cannot be readily discovered.
b. You can give less in weight or measure than expected and not be caught.

7. **You are buying property.**

a. You can change the price mark without being noticed.
b. You can buy something cheap, but you think that it was stolen.
c. You unwrap a package and discover that two articles were sent while only one was paid for.
d. You receive a package containing a much more expensive article than the one purchased.

III. STATEMENTS.

1. **You make statements about yourself.**

a. You need an excuse for an unjustified absence from school.
b. You have done something for which you know you will be punished if you confess when questioned.
c. You are questioned about your lateness in arriving at school or in getting home from school.
d. You are asked why you are not prepared in your studies.
e. You are questioned by your parents about misconduct in school.
f. You want to go to a ball game, and there is a chance that you might be excused from school if you plead sickness.
g. You are asked to report on the time spent in preparing a lesson.
h. You are required to report on your outside reading.
i. You forgot to clean your teeth, and the teacher asks, "How many cleaned their teeth this morning?"
j. You are asked if you studied your lesson, and you merely glanced into the book as you walked to school.
k. Many desirable activities at school are optional, and you can get your parents' consent to participate by telling them that they are compulsory.

- *l.* You have to account for your failure to get assigned work done on time.
- *m.* You are asked to tell of a personal exploit.
- *n.* You are gone a long time on a errand, and the teacher asks, "Where have you been?"
- *o.* Your new suit is ruined, and your father asks you how you did it.
- *p.* You receive help at home, and the teacher asks you if you have done your own work.
- *q.* You are asked if you enjoy poetry, music, or art.

2. **You make statements about other people.**
    - *a.* You accuse another person of some misdeed.
    - *b.* You tell incidents about people who are absent.
    - *c.* You are asked about the misconduct of a classmate.
    - *d.* You are asked how you liked another persons' clothes, speech, or work.
    - *e.* You quote what another person has said.
    - *f.* You attempt to convey to other people the attitude of a certain person at a certain time.
    - *g.* You dislike an individual, and you have an opportunity to make statements reflecting on his character.
    - *h.* You are asked to give a statement concerning something on which you are not qualified to report.
3. **Miscellaneous.**
    - *a.* You are questioned about the disappearance of an article.
    - *b.* You tell a story about things you are supposed to have seen.
    - *c.* You tell what you have and do at home.
    - *d.* Someone asks you for directions to a certain place, and you like to play jokes on people.
    - *e.* You are asked the price of something you own, and you want it to seem very expensive.

IV. PROMISES.

1. You have given your word, and it becomes unpleasant to keep it.
2. You promise to do something for someone but forget it.
3. You promise to meet a friend at a certain time, and it begins to rain unexpectedly.
4. You promise to study during the evening, and a friend asks you to go as his guest to see Douglas Fairbanks in a new picture.
5. You promise to go to the dentist after school, and a friend tells you how he suffered the last time he went.
6. You promise to return home immediately from the store, and you meet your chum on the way.

7. You promise your teacher never to fight again, and the most overbearing fellow-pupil calls you names before the other boys.
8. You promise to do a certain piece of work, and it proves more difficult than you imagined.
9. You promise to be home early, but no one else is leaving the dance early.
10. You promise never to lie again; the teacher asks you who stole John's apple, and you know that your best friend did it.
11. You promise to do something in a certain way, and later find that it is more convenient to do it differently.
12. You make a promise under compulsion, and later you do not want to carry out the promise.
13. You promise what you are not capable of doing.
14. You promise to obey the Golden Rule, and later a negro is seated next to you in school.
15. You make a promise to a person, and he apparently forgets it.
16. You promise not to ask for a second piece of cake at the party; the cake is delicious, and other children ask for more.
17. You sign a pledge or take an oath, and you would like to break it.
18. You join a club and promise to be loyal to it, but it does things your conscience cannot approve.
19. You join a church and make certain promises which are hard to keep.
20. You make a conditional promise, and the condition is fulfilled.
21. You promise to do something which you know is wrong, and later you reconsider and want to do what is right.
22. You promise to go to a party with one boy; the next day another boy, who is much more attractive, invites you to go to a dance on the same evening.

V. SOCIAL RELATIONS.

1. You do something, and another person is blamed for your action.
2. You are guilty of misconduct, but the teacher feels that she must punish the whole class unless the offender confesses.
3. The teacher leaves the room and appoints you as "monitor," and you accept the responsibility, but you do not like to report on others.
4. Officers are elected in your class or organization, and you do not like them.
5. At a class party, you break an expensive window in the Elks' hall, and the bill is sent to the class for payment.
6. You can please more people by agreeing with the sentiment of a group, but actually you disagree.
7. You see another person do something wrong, and the whole group is about to be punished.

8. You are publicly honored for doing something in performance of which you had valuable assistance from other people.
9. You have before other people wronged a smaller and weaker classmate.
10. Your home is quarantined for scarlet fever, and you are invited to go in an automobile to a picnic in a neighboring town.
11. Your younger brother has whooping cough; it is not reported, and you can go to school, but you have never had this disease.
12. A friend of yours is running for a school office, and you know that he is entirely unfitted for the place.
13. Your crowd does wrong, and you want to confess, but the others do not.
14. You are assigned to distribute books; some of them are more desirable than others; you have some friends, and you have an enemy.

VI. Rules, Directions, Orders.

1. The day is very hot; on your way to school some boys say, "Let's go swimming."
2. You are told to perform a certain task, and you do not want to do it.
3. Whispering is forbidden, but you have something you want to tell another pupil.
4. There are traffic rules in the school and no watchman; you are in a hurry.
5. The teacher leaves your room and asks the class to be on its good behavior.
6. Someone asks you, against the rules, to pass a note in school.
7. You are told to stay in at recess, but, when recess comes, your teacher goes out of the room.
8. You are told to report at the principal's office, but the principal is not there.
9. You want to take a short cut to catch a car, and a sign confronts you, "Keep off the grass."
10. You are driving an automobile and are late for an appointment; there is no policeman in sight.
11. You are asked to record your own conduct and report at the close of each day.
12. You are monitor of your section, and your friend answers for someone who is absent.
13. You are asked to report tardiness at orchestra practice, and a close friend is late.
14. Your report card is to be signed by your parents or guardian, but you do not want him to see your marks.
15. The teacher asks you, after you have dropped your marbles, to place them all on her desk; you think you can keep half of them without detection.

16. Your mother calls, and you do not want to go; you can hide and pretend that you did not hear.
17. You want to do some studying in a book which cannot be taken from the library; you can slip it out and take it back without detection.
18. You are told that you must not go to the "movies" for a week; during this time you discover that you can go without being discovered.
19. Only regulation shoes are allowed on the tennis court or gymnasium floor; you do not have regulation shoes but want to play.

VII. GAMES.

1. There is a disputed point in your opponent's favor; you know the truth but desire to win.
2. You are keeping score at a game, and you can help your side.
3. You are refereeing a game, and you like one side better than the other.
4. You desire a choice position in a game, and you can get it by bribery or "pull" or misrepresentation.
5. You are asked to play marbles for "keeps."
6. You are being worsted in a wrestling-match and have a good chance to foul.
7. You are playing tennis, and your opponent cannot see the back line.
8. You are playing golf and are out of sight of your opponent.
9. In a contest, someone offers you something not to play your best.
10. You are called upon to make a supreme effort against a strong opponent, and you can save yourself embarrassment by feigning illness.
11. You see an opportunity to win a game by committing a technical foul which will probably not be observed.
12. You consider the possibility of injuring a competitor in football by exceptional roughness.
13. You are "It" in one of the hunting games, and an outsider tells you where someone is hiding.
14. You see a boy on your own team cheat when he thinks no one is looking.
15. You can argue about rules so as to delay the game to your advantage.
16. You can "peek" when you are supposed to be blindfolded.
17. You see a chance to "get even" with a fellow-pupil by injuring him without making it seem intentional.
18. The umpire's back is turned, and you can cut the base.

VIII. CLASS RECITATIONS.

1. You are not prepared; you can feign sickness and cut class.
2. You are asked to mark your own or another person's work.
3. You are in a study period without supervision.

4. The teacher asks for a show of hands on the completion of the reading assignment; you have not finished, and the teacher has no other check.
5. You can answer, "I have forgotten," when you never knew.
6. You can keep your book open or notes before you when this is not permitted.
7. You do not know the answer to the question, but you can "bluff" the teacher.
8. You can give the teacher the impression that you have conscientiously prepared your lesson.
9. You can impress the teacher by asking needless questions.
10. You can interline your language translation.
11. You have the opportunity to copy another person's work at the blackboard.
12. You are asked a question the answer to which you do not know; a friend whispers the answer.
13. The teacher assigns a problem or exercise for class work which you cannot do; you can substitute another without detection.
14. You can use another person's idea as your own.

IX. Examinations and Tests.

1. You have an opportunity to look at another person's paper.
2. You have an opportunity to glance at prepared notes or at the textbook.
3. You do not know the answer to a question; the boy next to you sees your trouble and whispers it.
4. You are asked by another person for help on a question.
5. You see someone cheat.
6. The map over the answers falls, and you have a chance to correct your paper.
7. You can answer a different question, one of your own, as if by mistake.
8. In spelling, you can write one letter over another so that either can be read; your teacher is lenient.
9. You see the questions on the teacher's desk before the test; you can read them and look up the answers.
10. You notice that an error has been made in your favor in the marking of your paper.
11. Your teacher writes the questions on the board, puts the pupils on their honor, and leaves the room.
12. You do not feel prepared for the test; you can feign sickness or play truant.

X. Preparing Lessons.

1. You are translating foreign languages, and translations are available.
2. You are preparing assigned lessons in mathematics, and an older

brother offers to do the work.

3. You are asked to write a composition or book review for English, and illegitimate helps can be secured.
4. You must carry out an assignment, and outside help is prohibited.
5. You can get all of the notes and drawings in laboratory work from another pupil's notebook.
6. You are offered something for writing another pupil's theme.
7. Your teacher fails to ask for an assignment the day it is due.
8. Your teacher requests the class to report the amount of time spent in the preparation of a lesson.
9. You can trace when told to draw freehand.
10. You are expected to make an inspection trip, and you can make a report from a second-hand source.
11. You are told to read a book and tell the story; you can see it in the "movies."
12. You are supposed to collect specimens, and you can borrow from another.
13. You are not strong in arithmetic, and a friend offers you all of his night work to copy.
14. You are told to perform an experiment and write it up; you can write it up without performing it.

L. T. Hopkins,[1] using the Charters technique, has first determined the most desirable traits; second, broken these up into trait actions; and third, arranged and graded these trait actions with appropriate exercises into a conduct curriculum.

Summary. — In this chapter conduct is thought of as an objective of education. As such before it can be planned, controlled, or guided, it must be codified. Till now conduct has been largely a matter of custom which is passed on from generation to generation through the influence of group uniformity. To make conduct an objective of education means that education must be critical of its own procedure. Conduct codes have come down to us from the past. Long ago they were mainly specific rules of conduct in particular situations. More recently, conduct codes have become collections of generalizations and platitudes. These recent codes may be criticized as being too general, as being too ambitious, as being unanalytical, as neglecting overt habits, and as being imperfectly validated. A contemporary movement is attempting to analyze conduct into its constituent acts or habits. Conduct education awaits such analyses before it can proceed to build on a certain foundation.

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[1] Reported in the *Fourth Yearbook of the Department of Superintendence of the National Education Association.*

CHAPTER V

FUNDAMENTAL OVERT HABITS OF CONDUCT

The place of habit in life — The need for automatic habits — Dangers of automatic habits — Health habits — Personal habits — Thrift and conservation — Study habits — Habits of etiquette — Social habits — Summary.

The place of habit in life. — It is a question as to precisely how much of life should be reduced to rule or habit. There is much to be said on both sides of this question. In the first place, life itself depends on making certain automatic responses in the face of certain situations. "Look to the left and right before crossing the street!" is a rule upon whose strict observance depends one's bodily safety in these days of automobiles. Certain rules must become firmly ingrained into one's nervous system as habits if one is to live at all. Certainly in such cases where life itself is involved there is no justification whatever for having conditional habits. In some situations where there is neither time for thought nor question as to choice of procedure, instant and unconditional response is demanded.

The need for automatic habits. — In other cases where there is a goal or aim set up, there is often justification in making automatic some of the fundamental habits leading toward that end. For instance, if a person has as a goal the saving of money, either as a step toward acquiring a fortune or as a protection against the unknown future or as a means of acquiring more expensive things, then certain habits of thrift might well be made automatic for such a person — habits of spending, saving, accounting for money, and the like. If a youth intends to go through college with profit, then he can do no better than to school himself at the very beginning in certain habits of studiousness which should become practically automatic. Even for personal efficiency, such acts as care of the toilet, the procedures of eating, etc., should become strongly habitual.

As William James so well stated it:[1]

> The great thing, then, in all education, is to *make our nervous system our ally instead of our enemy.* It is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. *For this we must make automatic and habitual, as early as possible, as many useful actions as we can,* and guard against the growing into ways that are likely to be disadvantageous to us, as we should guard against the plague. The more of the details of our daily life we can hand over to the effortless custody of automatism, the more our higher powers of mind will be set free for their own proper work. There is no more miserable human being than one in whom nothing is habitual but indecision, and for whom the lighting of every cigar, the drinking of every cup, the time of rising and going to bed every day, and the beginning of every bit of work, are subjects to express volitional deliberation. Fully half the time of such a man goes to deciding, or regretting, of matters which ought to be so ingrained in him as practically not to exist for his consciousness at all. If there be such daily duties not yet ingrained in any one of my readers, let him begin this very hour to set the matter right.

Again, in some cases where the habit is one that facilitates living together, it is best to make the habit automatic. When I dodge to the right and to the left trying to pass a person on the street, I often wish that the habit of passing to the right had been so well ingrained in my opponent as it is in me. There are many such acts which facilitate group activity, often on no other basis than that they make for uniformity. Many of our acts of courtesy, our conventions and customs, may be justified on the basis that they reduce the friction inevitable in the give and take of social life.

Dangers of automatic habits. — The other side of the argument is stoutly upheld by John Dewey. His book *Human Nature and Conduct* seems to be leveled mainly against an educational theory which would reduce any phase of life to mere habit. I can best exhibit his point of view by quoting the following:

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[1] James, William: *Psychology*, I: 122. Henry Holt and Company, 1890.

> The tendency to think that only "bad" habits are disserviceable and that bad habits are conventionally enumerable, conduces to make all habits more or less bad. For what makes a habit bad is enslavement to old ruts. The common notion that enslavement to good ends converts mechanical routine into good is a negation of the principle of moral goodness. It identifies morality with what *was* sometime rational, possibly in some prior experience of one's own, but more probably in the experience of someone else who is now blindly set up as a final authority. To be satisfied with repeating, with traversing the ruts which in other conditions led to good, is the surest way of creating carelessness about present and actual good.[1]. . . Outside the scope of habits, thought works gropingly, fumbling in confused uncertainty; and yet habit made complete in routine shuts in thought so completely that it is no longer needed or possible.[2]. . . Since we live in a moving world, habits plunge us finally against conditions to which they are not adapted and so terminate in disaster.

Dewey is not preaching against flexible habits — he is pleading for greater intelligence in action. And yet, when we note the impossibility of creating intelligence where there is no native endowment, it would seem that sometimes it were better to suffer the routinizing of habit than to dare the chaos of a subnormal intelligence struggling with a baffling problem. One may have no quarrel with Professor Dewey in his general position. In certain instances it would be folly to refuse to accept the rules, say of hygiene, which have resulted from coöperative research; but in other instances where there are no rules of conduct which apply, as in choosing an occupation or a mate, all must be reasoned afresh for each individual. Professor Dewey's point of view will make us insistent that habits be valid before we set them up as objectives for conduct.

Health habits. — It is remarkable, when one stops to compare the wealth of habits that occur in other phases of man's life, how few the really fundamental rules of health are. When food, rest, air, sunshine, cleanliness, activity, and a few others have been taken care of the main habits relating to health have really been considered. Even workers in special branches of hygiene — sexual hygiene, mental hygiene, workers' hygiene — find that the rules of general hygiene are their most important ally, and that, having taken care of these, the special rules for the situation in question are of less importance and efficacy.

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[1] DEWEY, JOHN: *Human Nature and Conduct*, p. 66. Henry Holt and Company, 1922.

[2] *Op. cit.*, p. 172.

The writer recently heard that a doctor whose advice to tubercular patients used to be: "Fresh air, good food, rest!" has now changed to: "Good food, rest, fresh air!" The most important health habits are well known and have been known for a long time. Physiology has given doctors a knowledge of the bodily mechanism, its order and disorder. In broad lines it has been easy to lay down the main habits which are necessary for keeping the body in good health. To be sure, scientific investigation is constantly refining our knowledge, and with each new accretion to the stock of knowledge comes a new slant on health habits and on their relative emphasis. As an example, take the new discoveries concerning the vitamin. Previously it was considered sufficient to get the proper fuel value in the diet, provided that not too great injustice was done to the ratio between the food elements. Quite recently nutritionists began telling us that one thing is essential in food — the so-called vitamins. Certain foods contain them, and certain foods do not. A diet deficient in vitamins lower the vitality and power of resistance to disease. The new discoveries have changed the emphasis on the various nutritive elements in the food we eat. As a second example, consider the change in conduct following the "discovery" of the disease-carrying nature of the mosquito. Before this fact was known, the "night air" was supposed to give malaria and was avoided. Now at night we welcome the fresh air but avoid the mosquito.

The most thorough piece of work in determining the fundamental habits of health of which the writer is aware is that done by Dr. Ruth Strang under a subsidy from the American Child Health Association.

HEALTH HABITS[1]

LIST OF STATEMENTS MENTIONED MOST FREQUENTLY IN FOURTEEN SCHOOL TEXTS ON HYGIENE AND IN SELECTED PUBLICATIONS OF THE AMERICAN CHILD HEALTH ASSOCIATION

STATEMENT	TOTAL FREQUENCY OF MENTION
We should always wash our hands before eating	73
Children should never drink tea or coffee	60
We should keep objects out of our mouths	60
Chew food thoroughly	51
Have meals at regular times	41
We should sleep with windows open	40
We should clean the teeth at least morning and night	38
We should never use a drinking cup used by someone else	37
Hands and finger nails should be kept clean	36
We should keep fingers, soiled handkerchiefs, and unclean towels away from the eyes	24
We should be cheerful while eating	32
We should go to the toilet regularly in the morning	32
Breathe through the nose	31
Keep hands, face, neck, and ears clean at all times	30
We should get light from behind and above the level of the eyes when reading	29
We should remove wet garments	28
We should have a natural bowel movement at least once a day, preferably in the morning	27
We should always carry a clean handkerchief	26
We should always cough or sneeze into a clean handkerchief	26
We should have fresh air at all times	26
Always remove rubbers and overcoats indoors	26
Eat slowly	25
Wash hands after going to the toilet	24
We should drink a quart or more of water daily	24
We should never read in insufficient light	24
Wear seasonable clothing	24
Keep fingers out of the mouth	23

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[1] From STRANG, R.: *Subject Matter in Health Education.* Teachers College Contribution to Education, No. 222. Bureau of Publication, Teachers College, 1926.

Statement	Total Frequency of Mention
Eat willingly all wholesome food	23
Pores, perspiration, evaporation	22
Care of eyes	22
We should have sufficient sound sleep	21
We should guard against spitting on the hands or floor	21
We should keep tooth brush well sunned and aired and in an individual receptacle	21
We should breathe deeply	21
We should not eat too much food	21
Keep clean in dress, clothes well aired	20
We should brush lower teeth upward and upper teeth downward with a rotary movement	20
Water supply	20
We should drink plenty of water between meals	20
Keep school yard clean	20
Use makes muscles healthy	20

A more recent compilation of health habits is that by T. D. Wood and M. O. Lerrigo entitled *Health Behavior* (A Manual of Graded Standards of Habits, Attitudes, and Knowledge Conducive to Health of the Physical Organism, and of Personality, Home, Community and Race).[1]

This book has five scales containing lists of habits, attitudes and knowledge: I to be acquired before entering kindergarten; II to be acquired by end of third grade; III to be acquired by end of sixth grade; IV to be acquired by end of ninth grade; V to be acquired by end of twelfth grade; VI for adults.

Each scale follows the following outline:

I. **The Healthy Organism**
  A. Nutrition
  B. Big Brain-Muscle Activities
  C. Sleep and Rest
  D. Education for Parenthood
  E. Use of Fresh Air and Sunshine
  F. Elimination of Waste
  G. Care of the Skin

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[1] Public School Publishing Company, Bloomington, Illinois, 1927.

- *H*. Care of the Hair and Scalp
- *I*. Use of Clothing
- *J*. Care of the Feet
- *K*. Care of the Hands
- *L*. Care of the Teeth and Mouth
- *M*. Care of the Nose and Throat
- *N*. Care of the Voice
- *O*. Care of the Ears
- *P*. Care of the Eyes

II. The Healthy Personality

- *A*. Mental and Emotional Health
- *B*. Social Health
- *C*. Work

III. The Healthy Home and Community

- *A*. The Healthy Home
- *B*. Control of Infection
- *C*. Use of Professional Health Service
- *D*. Temperance
- *E*. Safety
- *F*. First Aid

It is generally agreed that habits such as these are primary. And it is generally agreed that they should be habits, — automatic, regular, working without exception at the proper time and place and in the appropriate situations. Moreover, it is generally agreed that they should be habits irrespective of whether they can be verbally repeated as rules, or whether the reason or scientific basis is known. Whether these habits can also be repeated as rules is a matter of pedagogy. Perhaps the rules are propadeutics assisting in the learning of the habits by emphasizing them. But the primary thing is the habits, regardless of the pedagogic accessories.

Personal habits. — The habits of conduct which we call personal are at present not so clearly defined as the habits of hygiene. No one has taken the trouble to catalogue them, although writers on safety, thrift, conservation, and personal efficiency have listed habits in these fields. Most thinkers in the field of personal conduct have given us platitudes or have codified their personal ideals in the form of very general traits or characteristics which of necessity must await the formation of many specific habits of actual conduct.

Then too, a great many habits which we call personal derive their validity not from any increase in personal efficiency but because they give us direct satisfactions or other more indirect values from our fellow men. Such habits as orderly methods in the schedule of daily activities, the care of money, clothing, and investments, are habits which lead directly to personal efficiency. But such habits as wearing clean collars, keeping shoes in good repair, etc., while not directly influencing one's efficiency, are valuable habits because of their effect on other people. A business man, doctor, or scientist could in all probability be as efficient technically in a soiled as in a clean collar, but he certainly would be at a disadvantage in dealing with other people.

The latter sources of validity are secondary and derived from more primary sources. There is no intrinsic value in the stiff collar nor in many of the dictates of fashion or custom; they are derived often on the grounds of the most casual contiguity. Certain experiences naturally arouse disgust and horror. Thorndike enumerates these as "bitter and oily things in the mouth; slimy, wriggling and creeping things on one's flesh; the sight and smell of putrid flesh, excrement, and entrails."[1] Things associated with these in any way soon and easily evoke the same reactions. Especially things that cause or even provide a fit environment for such experiences arouse our avoidance and disgust. This commonly is carried to the extent of intolerance for dirt of any kind, and cleanliness is found as an ideal in modern life. Many of our rules of manners may find their origin and their validity in like derivations from some primary tendency. When such ideals or standards are set up in the group it is often the part of personal efficiency to follow them. One must weigh rather carefully sometimes the loss that comes from constriction of movement and the restraint of personal freedom, both direct hindrances of personal efficiency, with the gains that come from avoiding the stares and disapproving looks of others, and also from obtaining their positive approval. Hardly a man but balks at the absurd fashion of wearing a jacket in the summer time, yet we all do!

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[1] THORNDIKE, E. L.: *Educational Psychology,* Vol. I, Chapter X. Teachers College Bureau of Publications, 1913.

No careful classification of personal habits has been made, nor are the separate fields carefully delimited. Writers on hygiene discuss habits which are definitely a part of manners. Writers on courtesy discuss rules of cleanliness and neatness which are clearly rules of hygiene. Thrift writers borrow rules from the field of conservation — and people interested in conservation borrow rules from what more strictly belongs to thrift or personal efficiency. Truly life does not permit clean-cut classifications and analyses. But in the interest of education it would be well if the habits relating to conduct were a little more clearly comprehended.

Thrift and conservation. — No one has catalogued the rules of thrift and conservation in such a thorough way as has been done for health. Although we have an annual thrift week with much accompanying preaching, and although school savings banks are quite general, the bankers of the country have not seen the problem of thrift as an educational problem as have the doctors seen the problem of health. In lieu of better codification the following brief list is given:

HABITS OF THRIFT

1. Make and use a budget.
2. Spend money wisely.
3. Practice small savings in paper, pencils, light, food, clothing, and money.
4. Keep accounts.
5. Save regularly.
6. Care for books, shoes, clothing.

7. Salvage clothing and paper.
8. Use orderly methods.
9. Repair clothing.
10. Be neat in dress.
11. Save for a purpose.
12. Save in a bank.
13. Buy for cash.
14. Buy in large quantities what is continually used.

These rules depend on no experimental evidence. They are for the most part self-evident, common-sense rules that may be derived from common observation.

Study habits. — Study habits have often been discussed in books on how to study. They have usually been deduced from experimental evidence or from fundamental psychological principles. Their validity is often open to attack, however. The illustrations given in Chapter I of the conflicting results between the "Iowa Study of Gifted High-School Students" and customary rules of study show that at least some of the rules, if still valid, have comparatively little importance. What is needed here is extensive experimentation as to just what constitutes "good study." The best formulation of a set of rules of study is that given us by Whipple in his little book *How to Study Effectively*.[1]

Habits of etiquette. — In recent years there has been a great demand for books on etiquette. Emily Post's book on this subject has been a best seller and is in great demand at public libraries. The hypothesis is ventured that the moving picture is responsible for this awakened interest in the "right" way of doing things. The moving picture has brought home to thousands of people the realization that there are "standards" of decency and etiquette which are requisites for entrance into cultured society. Yet these same etiquette books have been published quite regularly for many years. An old etiquette book arouses one's mirth — it seems so prudish. Living according to these books would become a round of calls and introductions, of conventions and restraints, of agreeable conversations and pleasant smiles. In one of these old books, *Instructions in Etiquette for the Use of All*, by John Butcher, published in 1847, one finds such passages as:

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[1] WHIPPLE, G. M.: *How to Study Effectively*. Public School Publishing Company, Bloomington, Illinois, 1916.

> Do not mop the face with the serviette, but take it between the finger and thumb of both hands, and draw it lightly across the mouth. Should the mouth be too full for speech, lay the finger on the lip and shake the head slowly.

The book was written in conversational form:

> *Qt.* What movement should be made by a lady who meets a person to whom great respect is due, as for instance, a bishop?
>
> *Ans.* If she has only to make him a passing salute, it must be by an elegant bend of the body, rather low, and with a serious countenance, and, in order to make her respect more obvious, she may, if intimate, kiss her hand at the same time. To other gentlemen it is seldom, if ever, proper to kiss the hand. To an intimate friend, you may wave your hand, but should not kiss it, as a young gentleman might possible put an improper construction upon your politeness. This mode of salutation is never allowable to a gentleman who is not at once much your elder and your very particular friend.
>
> *Qt.* How should the arms be placed when walking in the street?
>
> *Ans.* Let them hang gracefully by the side, but not dangling. A lady may place one arm across the waist, the hand being open to receive the other arm if necessary. But the propriety of the position depends upon the dress. If a scarf is worn, let the end of it flow gently over the arm that is raised.

In this connection the following extract from *The Letters of William James* comes to mind:

> His (the father, Henry James) prime horror was of prigs; he only cared for virtue that was more or less ashamed of itself; and nothing could have been of a happier whimsicality than the mixture in him, and in all his walk and conversation, of the strongest instinct for the human and liveliest reaction of the literal. The literal played in our education as small a part as it perhaps ever played in any, and we wholesomely breathed inconsistency and ate and drank contradictions. . . . The moral of all was that we need never fear not to be good enough if we were only social enough; a splendid meaning being attached to the latter term. Thus we had ever the amuse-

ment, since I can really call it nothing less, of hearing morality, or moralism, as it was invidiously worded, made hay of in the very interest of character and conduct; these things suffered much, it seemed, by their association with conscience — the very home of the literal, the haunt of so many pedantries.[1]

The whole trouble is that these rules of etiquette are for the most part artificial standards set up for the sake of uniformity, usually for those with leisure. They are customs and partake of the evils of custom. Whereas in their origin they all had a reason, this reason has passed with time and change, and they persist as mere conventions.

A good example of the fortuitous nature of conventions may be had by comparing the customs of one country with those of another country. Who is to say that one set of rules is better than another? Following are a few contrasts between Chinese and American customs.[2] Perhaps we may favor one set of customs or another because of hygienic considerations or convenience; but on the whole, preference for our own American standards would be largely because of familiarity:

CHINA	AMERICA
The invitation card is red in color in case of a wedding and white in case of a funeral.	The invitation card is white in case of an ordinary invitation, and with black enclosure in case of a funeral.
It is impolite to expect a guest to answer invitations, for the host should count on the guest anyhow to show his respect for him, and the guest is bound to give gifts no matter whether he comes or not.	It is impolite for the guest to neglect answering the invitation, as it will suffer the host to have his preparation go to no purpose and be wasted.
It is polite to rise before the feast is over, showing how satisfied you are before the last course.	It is impolite to leave before the host. Only the host knows when to rise, unless there is a special reason.

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[1] *The Letters of William James*, I: 14. The Atlantic Monthly Press, 1920.

[2] LIU, CHIANG: "Contrasts Between Chinese and American Social Codes," *Journal of Applied Sociology*, X: 41–45, 1925–1926.

CHINA	AMERICA
Thank the host right after you sit at the table, no matter what kind of dinner you are going to have.	Thank the host after the dinner is over or when you are about to leave the house.
It is polite for a Chinese to ask one another, "What is your honorable age?" and to answer, "I have wasted thirty springs."	Americans object to telling age even in case of old men and women, and among members of their own sex.
A Chinese uses flowery language such as, "Can I have the privilege or borrow the light of learning your honorable surname and the name of your carriage (meaning given name)?"	An American will use the simple language, "Say, what is your name? Where do you come from? etc.," without any decoration.
A Chinese uses both hands to greet his friend, meaning entire devotion to him.	An American shakes his hand with that of his friend, showing intimacy by means of contact.
A Chinese takes off his eyeglasses upon meeting people or in public places. The meaning lies in the fact that wearing eyeglasses implies old age and taking them off means that the person himself descends from his time-honored position to that of a young man.	An American takes off his hat in public places or in greeting ladies and superiors. Probably because the head is the most important member of the body, it means respect when it is left uncovered.
A Chinese is very careful about privacy. It is too personal to inquire about one's fiancée, wife, or anything of a similar character.	An American is very expressive. An American boy or girl does not hesitate to tell his or her friends who his sweetheart or her lover is. He or she would even show his or her picture to anybody.
In China any lady exposing any part of her body is taken as a wanton woman. She would invite severe criticism or might even be condemned as a prostitute.	In America ladies wear short skirts, short sleeves, coats without collar, stockings with holes, dresses exposing the shoulders, and larger part of the bosom, to show the beauty of their natural features. In classrooms, public places, streets, and in fact everywhere, they do not hesitate to powder their faces.

China	America
In the Chinese society the two sexes are separated. Dancing belongs to actors on the stage when they play the part of women.	In American society the intermingling of the sexes is a common thing. At dinner tables ladies and gentlemen sit in alternate seats. Few parties exclude women or men, that is, for one sex only. Dancing is permitted, even in the church parlor. In plays both sexes participate.
A Chinese does not employ a woman as waitress either at the women's table or the men's.	An American employs both sexes as waiters and waitresses.
A Chinese pays more respect to teachers. He is considered as a foster-father. He bows to the teacher before he receives teaching. Every time a teacher enters the classroom, all students stand up.	An American does not pay so much respect to his teacher. He remains in his seat when the teacher enters the classroom. In case of a student girl, the teacher, for the sake of chivalry, even has to open the door to let her go in before himself.

These are different from American customs, but are they inferior? An off-hand answer cannot be given.

The educator who wishes to find the most worthy objectives is pulled in two directions. On the one hand, there is the force of convention, which would have education bring up youth to fit into the life of the passing generation. This is a worthy objective. There is a certain human value in having the children of the immigrant in some way cling to the home nest with its customs, traditions, and language. At least, sensibilities are strained where the children throw off the parental traditions. On the other hand, this clannishness, or today we had better call it extreme nationality, has led to a great deal of the world's misery and suffering. Oftentimes there are certain customs and conventions which are distinctly superior to others; those, for instance, which lead to greater cleanliness. Again there are customs and conventions, hardly even matters of convenience, for which no rational claim can be made.

I shall not attempt to list manners, since it is obvious from the foregoing discussion that such a list would be invalid in the sense that the rules included could not possibly be justified as objectives of education on any basis except that of making for uniformity. There is a need, however, for some student to list manners as they are described in books of etiquette for use as a basis of departure in obtaining a satisfactory list.

Social habits. — When we come to social habits — habits of reacting to other people — the case is yet more unsatisfactory. It is to this phase of conduct that Dewey had reference. It is folly to try to put conduct in the social field on a basis of blind habit. One reason for the difficulty in describing desirable social habits is the conflict in different customs and conventions. Another reason is the rapid change or development of our social structure and of the material foundation for social relations. To review the changes caused by increased locomotion and communication, by the extension of manufacturing and the greater accessibility of power, is needless. Our swiftly moving age defies the static moralist who would codify social conduct. The younger generation is constantly uprooting the habits of its elders. Even shifting conditions in industry raise problems faster than they can be solved. The great need in social education is not so much habit formation as it is a disposition to change one's social habits when conditions demand such a change.

A third reason for the difficulty in enumerating desirable social habits can best be described in the following experiment. The writer's desire was to find what relation existed between (1) the importance of conduct; (2) the generality — definiteness of conduct; and (3) the nature of the stimulus-response, whether directed toward things or persons. The following list of habits was taken from the Upton-Chassell scale and mimeographed in random order:

Is courteous and considerate

1. Is tactful, avoiding saying or doing that which would unnecessarily pain or annoy another.
2. Picks up something dropped by another.
3. Avoids passing in front of others.
4. Does not interrupt others needlessly.
5. Is pleasant in greeting, and (if a boy) raises his hat or cap.
6. Is thoughtful in making requests of others, including helpers.
7. Allows pupils in front of him or older persons to pass through doorways or into the elevator first.
8. Is chivalrous to women and girls (if a girl, acknowledges acts of chivalry pleasantly).
9. Gives up his seat in crowded places to older persons.
10. Avoids whispering when it will annoy others.
11. Waits quietly in turn for some privilege, such as sharpening a pencil.
12. Is mannerly at lunch.
13. Avoids abruptness of speech when addressing a person or replying to a question.
14. Does not make disparaging remarks or sneer and laugh at others.
15. Opens door for others.
16. Is reverent in attitude during prayer, or at least does not disturb the devotions of others.
17. Remembers by letter or inquiries those who are sick.
18. Laughs and talks quietly.
19. Gives up his seat in crowded places to older persons.
20. Is attentive when some one else is talking, whether it be another pupil, a teacher, a visitor, or a speaker in a public place.
21. Offers book to visitors or to others who have none.
22. Acknowledges favors graciously.
23. Closes door or desk quietly, and uses pencils and other articles without making unnecessary noise.

Through error by the typist Nos. 9 and 19 were duplicated. The blanks were distributed to fifty-two college and extension students who were asked to rate them according to the following scales which were to serve as guides:

Generality-Definiteness Scale

10 ability in mathematics
9 ability in arithmetic
8
7 ability to add, subtract, multiply and divide
6

5 ability to add in columns
4
3 ability to add integers
2
1 ability to add 2 and 3
0

The directions were:

Some of these habits of courtesy are more general than others just as ability in arithmetic is more general than ability to add integers. No. 8, for instance, "is chivalrous to women and girls" probably includes several of the other more specific habits. Start with No. 1, decide as best you can where it comes on the scale and place the scale number in the left column.

Social-Object Scale

10 humanity — God
9 country
8 community
7
6
5 person
4
3 part object and part person
2
1
0 object

The directions here were:

Some of these habits of courtesy are stimulated by people and the act is directed toward people — some of them are stimulated by objects and are directed toward objects, some are half and half. Start with No. 1, decide where it comes on the scale and give it a scale value. Do the same with the other items on the list.

No assertion is made concerning the equality of steps on these two scales, for obviously they are unequal, but they served as guides, and the end results would not have been very different — at least as regards rank-order of the items.

The Upton-Chassell scale already includes ratings as to the importance of the items. Following are the results:

HABIT NO.	IMPORTANCE	GENERALITY	SOCIAL	HABIT NO.	IMPORTANCE	GENERALITY	SOCIAL
1	7.9	8.6	5.65	13	5.0	5.5	5.0
2	3.4	3.0	3.15	14	7.8	5.8	6.0
3	3.7	3.8	4.85	15	3.7	3.5	3.95
4	5.6	5.0	5.3	16	7.7	4.8	8.1
5	5.7	4.7	4.55	17	6.05	5.1	5.2
6	6.3	6.6	5.75	18	4.1	4.9	4.8
7	4.3	4.3	5.2	19	5.5	3.5	4.5
8	7.2	7.1	6.15	20	6.9	5.5	6.4
9	5.5	3.7	4.7	21	3.6	4.1	3.95
10	5.5	4.3	5.85	22	5.1	5.6	4.4
11	4.4	4.0	3.4	23	3.4	4.2	1.6
12	3.9	5.8	4.75				

Call importance 1
generality 2
social 3

The correlations (rank-difference method) are:

r_{12} + .64 $r_{12\cdot3}$ + .28 $R_{1\cdot23}$ + .82
r_{13} + .80 $r_{13\cdot2}$ + .66 $R_{2\cdot13}$ + .68
r_{23} + .64 $r_{23\cdot1}$ + .28 $R_{3\cdot12}$ + .82

The fairly high correlations are significant. The correlation between generality and social nature of the habit concerns us here, being + .64. The more specific these habits, the more they are directed toward and concerning things; the more general these habits, the more they are directed toward and concerning persons. It is comparatively easy to formulate rules of how to handle knife and fork, what to do with napkin, handkerchief, toothbrush, drinking cups, flag, other people's property, and the like. But it is difficult to state just as definitely how to treat other people, what to say, when and what to give or take from them. I see no reason why fundamental conduct with respect to other people cannot be made just as definite and precise as conduct with reference to *things*. And yet it has not been so made. Neatness we can describe well, telling precisely what should and should not be done; but tact — who can tell the rules for tact? Thinkers on character usually pass off this question by stating that tact is an inner disposition. That dodges the issue. Whether a person has the set or purpose to be tactful is one thing; what he does in being tactful is another. The most general habit in the list, "Is tactful," is among the most social; the least social habit, "Closes door and desk quietly", is among the most specific. The correlations with importance are both high. Note especially the high partial correlation of .66 between importance and the social nature of the habit with its generality constant. This is the third reason for the difficulty in describing valid social habits — the most general habits are so much more important that the more specific habits have been overlooked or underestimated. But the more general habits depend on the more specific habits for their formation.

It is difficult to plan the conduct education of the child in preparation for the conduct of the adult. The problems of conduct of the adult in business, in sport, as a member of the family, or as a citizen are quite different from those of the child. The freshman must obey; he must play the less desirable positions on the teams, he must do the errands for the college paper, or pull back the curtain in the dramatic society. The senior takes the leading parts; he captains the teams, edits the paper, receives the honors. Yet the careful observer recognizes a continuity in life. The same habits of regularity, of friendliness, of honesty, of willingness to do the disagreeable or to take responsibility may be seen in childhood and adulthood. It is well known that, in a new situation, that response will be made which in the past has been made to one or another element in the situation resembling a similar element in the present situation. No one ever does the unique — there is always a chain of similar situations which insures continuity of response. Conduct persists through similarity in the situation. Hence, it should be possible by analysis to find those threads of continuity so that desirable conduct in adulthood may be prepared for by appropriate fundamental habits in childhood.

The relation of childhood conduct and adult conduct is like the integration of simpler activities in the formation of more complex activities. Typewriting, for instance, presupposes ability to recognize letters, to read, to spell, to control the fingers in certain ways, and many other elementary skills. By practice these become integrated into the more elaborate skill — typewriting. Likewise, a successful marriage is a skill depending for its accomplishment on the integration of many simpler activities and skills that have been formed earlier in life — little habits concerning the treatment of other people weaker or stronger than oneself; little habits connected with the handling of time, money, clothing, work; little habits of reticence, outspokenness, criticism or approval, and the like; and, of special importance, habits of welcoming or rejecting, accepting or spurning the behavior and results of behavior of others. As in typing, the imperfection of one set of elementary habits such as spelling will make a poor typist, so in marriage, the imperfection of any habit or set of habits will mar the success of the relation. What the man will do with his earnings is determined in large part, through the evolution of gradual change, by what he has done as a child with his pennies.

It should be the aim of the educator, after having determined the desirable social habits of adults, to trace back the normal development of these habits through college and school to early home life. Critical analyses should be made of successful conduct in all kinds of frequent social situations with the intention of determining the elementary habits which form the integrated series. Then, always excepting these strong social forces which sometimes set aside rooted habits, it ought to be possible to develop in the child habits which, at least in the normal course of events, have the best chance of developing into the most worthy conduct.

Take as an example business honesty. What can a child know of the forces acting on his father to make him do the shady thing in a business transaction? Neither the child's world nor the youth's is concerned with adult affairs. Nor can one artificially interest the youth to face the problems of the adult in discussion or otherwise. The child's world is his own; the youth's world his own. But if it be found that business honesty depends on such simple habits as accuracy in weighing, accuracy in counting, satisfaction in giving a value equal to that received, and annoyance at the opposite, satisfaction at observing laws or the rules of the game and annoyance at the opposite, the habit of facing all facts without dodging, the habit of not deceiving people, and the like, then surely the foundations of business honesty can be learned in childhood. Situations constantly arise and situations can easily be devised by parents and teachers in which these habits and attitudes can be formed.

Educators have shown the value of play as an educative force. Greater power yet will accrue to play when we have defined specific objectives to be achieved. For play provides the great opportunity to place children in situations that approximate adult situations. Skillfully handled, play ought to yield situations where all the desirable elementary adult social habits can be formed. The "spontaneous play" of children takes on adult situations and "suggestion" furnishes the habits. Of course children must follow in their play whatever models they have. But the power of planned suggestion in play — "supervised play" — is only now being realized. Of most importance toward the habits of good citizenship are those plays of organization in the age of adolescence.

The main problem which arises out of the discussion of the fundamental overt habits of conduct is the problem of validity. When is a habit a valid objective for education? The previous discussion brought out the fact that certain habits, such as the habits of health, are practically universally valid. The aim, "good health," is so definite and insistent and science has shown the way to it so truly that there is no doubt as to what health-education means. With this determination of definite ways and means to health and of what health education involves, the health-education program has advanced rapidly in recent years, until now it is one of the most firmly entrenched parts of the curriculum. At the other extreme are habits of social intercourse where we only dimly know what we want and even less how to achieve what we do want. The bulletin "Cardinal Principles of Secondary Education"[1] states as one of the objectives, efficient citizenship. When educators and sociologists tried to set down the more immediate objectives of civic education, they found that they did not know them. In such a problem, we are not confronted with the immutable laws of physiology and chemistry, as in hygiene, but with the changing forms of social organization. What is good citizenship in France may not be in Japan, and what was good citizenship fifty years ago certainly will not be fifty years hence. One cannot experiment with forms of living together to find the most efficient modes of government as scientists can experiment with plants and animals. Social experiments are rare and costly. The only resource is to fall back on the composite judgment of sagacious men — an unsure procedure, for no one is able to shake off entirely the prejudices of the past.

Summary. — Certain phases of conduct should be reduced to a level of habit. Education needs to know what these desirable habits are so that they may not be overlooked and plans may be made for forming them. Wherever valid habits of conduct are known education may make them its prime objectives. These habits should be tabulated so that this primary conduct education may be systematic and thorough, rather than opportunistic and desultory. The main habits of health are well known. In certain other fields of personal efficiency, such as thrift or study, the important habits have been listed. But in the realms of social contact the fundamental habits have not been analyzed and listed. There is great need for this to be done, if for no other reason than that they supplant the rules and conventions of custom and etiquette which are of only doubtful validity.

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[1] U. S. Bureau of Education Bulletin, 1918, No. 35.

CHAPTER VI

IDEO-MOTOR CONDUCT

Most conduct controlled by peripheral stimuli—Words or thoughts as the cues of conduct — The genesis of ideo-motor activity — Experimental evidence of ideo-motor connections — Analysis of ideo-motor behavior — Application to hygiene — Application to thrift — Application to study — Application to moral conduct — Ideo-motor conduct a transition phase — Summary.

Most conduct controlled by peripheral stimuli. — The last chapter considered gross muscular responses to peripheral or kinaesthetic stimuli. Such responses make up the bulk of our conduct. We are constantly being acted upon by our environment and being impelled to act as past performance directs, often in habitual or stereotyped ways. In this chapter we are to consider the same sort of response that is initiated not by propinquity to some object to which we are sensitive but by some verbal or mental stimulus. As suggested in Chapter II, these mental stimuli are considered by some psychologists as being kinaesthetic, the results of verbalization, although at the present time it is not possible to locate the precise musculature involved in implicit thinking.

Most persons have the habit of brushing their teeth every night before going to bed. As the practice goes, night after night, there is very little thinking about it. After partly undressing, one proceeds to the bathroom. On entering the bathroom, one is guided entirely by visual and kinaesthetic cues. The hand goes directly to the toothbrush or to the knob of the cabinet where the toothbrush is kept. The eyes direct the hand, although the successive chains in the procedure have become so ingrained that many persons could come very close to putting their hand on the toothbrush or the knob of the cabinet without the light. Once the cabinet door is open, sight again directs the hand to the toothbrush. The other hand is directed to the faucet and the water is turned on to permit the process of wetting the brush (a stereotyped procedure of running the brush through the stream several times when probably once would be sufficient). One goes through the process guided and controlled almost entirely by the senses of touch and sight and the muscular activity in the just-previous stage of the act. All the while the brushing goes on one is thinking, but the thoughts are not on what one is doing but on the conversation one has just had, on what one has read, and on the events and circumstances of the day, particularly those events or circumstances that seem to be especially potent to one's interests, ambitions, etc. The habitual performance of brushing the teeth has no control or guidance from one's thoughts, which, like the froth of a wave, have no influence on the immediate process. But if in any step of the process some of the cues are different from usual, the attention is immediately arrested, and thought comes to the rescue to aid activity. If one's toothbrush is not in its accustomed place, if the water is not clear, there is a break in the chain of habitual activity. The process of brushing the teeth while traveling demands much thought — searching for the toothbrush in the bag, choosing the small basin set apart in the Pullman car for the purpose of brushing the teeth, and many other similar problems ensue.

Particularly important is the very first step in the process of brushing the teeth. Once the process is set off it goes on more or less automatically. Whatever the cue is that starts it off, it seems to work equally well at home or abroad. At a certain stage in undressing, habit directs that the next step shall be brushing the teeth. Our daily life is so linked together by chains of habit that we all have had the experience of taking keys out to unlock unlocked doors, winding our watches on taking off our vests, etc. When our thoughts are following their own course, we are the prey of whatever external stimuli we have been in the habit of letting control our actions. Much if not most activity is initiated and guided by peripheral cues so that conduct seems to be controlled from without.

Words or thoughts as the cues of conduct. — Educators, on the other hand, tend to emphasize words and thoughts as stimuli or cues of conduct. The whole scheme of formal education has been built around the theory that learning words will be followed by doing; that what is taught a child by word will result in action; that book learning is all-sufficient, since those who *know* the right will *do* the right. Civics is taught from books in school with the belief that what is learned will result in habits of good citizenship. Formal grammar is widely taught in the interests of correct use of English, with the implicit belief that he who knows the ways of correct speech will follow them. Only recently physiology was taught in schools as health education; and pupils are today taught to solve problems in interest, stocks and bonds, profit and loss, and discount with the faith that from this instruction will come thrifty and businesslike conduct. Sunday schools give instruction in the moral virtues apparently with the belief that the precepts learned on Sunday are practised during the other six days of the week.

Psychological and educational theory has taken every position with regard to ideo-motor activity. On the one hand there is James' statement that "every representation of a movement awakens in some degree the actual movement which is its object; and awakens it in a maximum degree whenever it is not kept from so doing by an antagonistic representation present simultaneously to the mind."[1] School practice in large part seemingly accepts the ideo-motor theory. On the other hand Thorndike maintains that "the great majority of movements are not produced by ideas of them and that the majority of ideas of movements do not produce the movements which they represent."[1] Thorndike does not deny the existence of verbal-motor bonds but maintains that they are comparatively few in number. The questions under consideration in this chapter are: (1) to what extent do ideo-motor bonds form part of conduct? (2) To what extent should education aim toward the formation of ideo-motor bonds? (3) To what extent is education justified in its practice of providing information, mottoes, slogans, and the like and expecting them to issue in conduct. There are three ways in which this issue may be treated: (1) deductions may be made from general psychological principles; (2) deductions may be made from developmental analyses of conduct; and (3) direct experimental evidence may be used.

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[1] JAMES, WILLIAM: *Psychology*. II: 526. Henry Holt and Company, 1890.

That ideo-motor connections exist hardly needs demonstration. One can plainly see them when spoken commands are obeyed. They are evident when one responds to what one reads, as looking at the clock to tell whether or not it is time to go out. From these obvious acts it is but a short step to the behavior which results from an internal thought. The laws of learning indicate plainly how such learnings may take place. If the child finds that when he leaves for school the hands of the clock are always in the same position, he learns to associate the time as he reads it with the act of going to school, and later his reading of the time may be the cue for leaving for school. As Thorndike says, "When an idea does produce the movement which it is an idea of, that movement gives evidence of having been bound to that idea by exercise or effect."[2]

The genesis of ideo-motor activity. — The baby first learns to respond to words peripherally originated — to spoken language. It learns to associate certain words with objects and with acts. These latter are the basis of ideo-motor action. "Eat this!",

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[1] THORNDIKE, E. L.: *Educational Psychology.* I: 185. Teachers College Bureau of Publications, 1913.

[2] *Op. cit.*

"Don't touch!", "Come here!" are early associated with certain acts whose meaning they convey, and the bond is formed connecting these words with acts they connote. With the normal child this process goes on until there are several score of word-act combinations. When the child goes to school the spoken word is associated with the printed word, and new bonds are formed with reading and doing. Newer methods of teaching reading make much use of following directions. The child learns to read, "close the door," "open the door," "hop," "jump," "give the pencil to the teacher," associating the acts with the printed words. It would be logical to conclude that, as a result of this reading-acting activity which is becoming widespread in our schools, a generation will grow up for whom it will be easier to act on the basis of what they read. Health hints which occur in the daily press will be acted upon much more easily by the growing generation than by their parents because of this type of training in school. The future generation will be more print suggestible just as today we are orally suggestible. This has undesirable as well as beneficial possibilities. Propaganda of an evil sort as well as exhortation toward virtue will be all the more efficacious.

So one learns to obey commands and follow suggestions which come in the form of words by peripheral stimulation. In the process of learning to talk, a baby at first makes more or less random vocal sounds. These sounds impinge on his ears and set up responses which are probably imperfectly distinguished from the sounds or words coming from other people. As other people's words take on significance for the baby — that is, as they become associated with objects or acts — the baby tries to manage his sounds so that he can control other people with the same sounds (words) that apparently have significance for them. This is not a conscious control but is a result of trial and error, the end of a series of random activity by which the baby tries to alleviate hunger, engage in play, or win admiration. As the baby stumbles onto a sound in his random vocalization that approximates a word, his parents give him all encouragement and the process accelerates until the baby's efforts result in positive control of the parents.[1] This causes the baby to redouble his efforts to make his sounds run into grooves which are apparently meaningful to other people and which approximate sounds or words they speak to him. In this process the baby is guided by hearing his own voice in exactly the same way that one is guided by sight in putting a hand on a door knob. So the sound of a voice (to which the child has learned to respond by conduct) becomes associated with the act of speaking, which in turn becomes associated with conduct. One finds little children talking to themselves, issuing orders to themselves or to their dolls or soldiers, and in general learning to respond to their own vocalization. Now another step of associative shifting takes place. The sound of the voice becomes associated with the muscular or kinaesthetic sense of vocalization and the child learns to respond to his own *act* of vocalization. This is the stage of implicit vocalization in which conduct follows *thinking*. Let us review the stages in this process of conditioning as involved on hearing a request to shut the door. First, there is the direct response of reacting to someone's requesting or suggesting that the door be shut. Second, there is a shift from hearing someone else to hearing one's self say, "Shut the door!" Third, there is a shift from hearing one's self say, "Shut the door!" to *feeling* (kinaesthetic) one's self say, "Shut the door!" Lastly, there is a shift from the kinaesthetic sense of overt speech to the kinaesthetic sense of implicit speech or thought. This process may also come through the sense of sight. First, there is the spoken word of others. Second, there is the spoken word of one's self. Third, this spoken word is shifted to the printed word. Fourth, this printed word is shifted to the kinaesthetic sense accompanying the act of reading, which may be much the same as implicit vocalization. Lastly this kinaesthetic sense is shifted over to what is called implicit vocalization — what we know as thinking. The process may also come (more rarely) through the act of writing by a shifting of the same general character as has been described for speech.

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[1] Not all of the early language activities of a baby are for the purpose of control. There would seem to be some language activity which is enjoyed merely as a form of play.

Experimental evidence of ideo-motor connections. — The experimental evidence of the existence of ideo-motor bonds is scattered and heterogeneous. Waring studied the degree to which early language habits in young children affect their early habits of control.[1] She tested experimentally two equated groups of children in the learning of simple skills such as hitting a target with a ball, stepping through boxes, stepping over boxes, arranging in order the Montessori broadstairs, throwing bags into a hole, using a tool to get golf balls out of a bowl of water, stepping through a series of rope rings, and stepping on blocks in alternate arrangement. One group received a nod, a smile, and a word of approval — "Benito" — for each successful response, while the other group received a nod and a smile but no language approval. The same two groups were also tested in the learning of fourteen discriminations, such as discriminating between high and low pitch in bells, between rough and smooth balls, between the sizes of five cans, between heavy and light boxes, etc. After each successful response approval was shown in a manner similar to that employed with the two groups in the first experiment. The results indicate that greater gain resulted in the group in which the language approval was used. "Language approval was found to facilitate, to expedite, to insure, and to extend conduct control." It is quite evident that language-motor bonds were effective in this experiment.

Cook and O'Shea report experiments on the use of rules in spelling.[2] They found that persons tend to fall into three classes as regards the use of rules in spelling: (1) those consciously using a rule in writing any particular group of words; (2) those later recalling a rule governing a certain class of words, but not consciously employing it; (3) those who cannot remember any rule applying to the words spelled. In general the students who spelled without use of or reference to rules outnumbered those who used rules. Some students declared that the way a word "looks" is the best guide. Although students who could give some sort of rule to cover any part of the list of words averaged four per cent higher in general spelling efficiency than those who could not give any rule, the experimenters believe this to be the result of better spelling ability in general. In reviewing the spelling investigations of Miss Watson,[1] Gates says, "The use of the rule — the verbal formula — alone is of slight value." [2] In the case of spelling the evidence is not decisive that the learning of rules is an aid in learning. It is certain that most people spell without reference to rules.

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[1] Waring, E. B.: *Relation Between Early Language Habits and Early Habits of Conduct Control.* Teachers College Contributions to Education. No. 260, 1927.

[2] Cook, W. A. and O'Shea, M. V.: *The Child and his Spelling.* The Bobbs-Merrill Company, 1914.

Butterweck studied the value of rules of study in teaching high-school pupils how to study.[3] He divided a high-school tenth grade into three sections equated on the basis of studiousness. To one group he gave instruction in the art of study, to another group he gave practice in the technique of study with a minimum of discussion, and to the third group he gave no special help in connection with their study. Both experimental groups improved in the course of the year over the control group in their school work. The group practised in study techniques gained more than the group which discussed the art of study, although certain superior boys gained more from the discussion than any of the boys in the practice group. For the typical high-school student, practice in the technique of study was of more value than discussion and exhortation in the art of study.

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[1] WATSON, ALICE: "Experimental Studies in the Psychology and Pedagogy of Spelling," unpublished doctor's dissertation in Columbia University.

[2] GATES, A. I.: "Classroom Applications of Psychology," *The Classroom Teacher*, Vol. I. The Classroom Teacher Inc. Chicago, 1927.

[3] BUTTERWECK, J. S.: *The Problem of Teaching High School Pupils How to Study*. Teachers College Contributions to Education, No. 237, 1926.

Voelker's work[1] (mentioned in Chapter IV) has been widely quoted as indicating the value of codes, exhortations, and the like in forming conduct. One must take into consideration in connection with Voelker's results the fact that the boys received considerable practice in trustworthy behavior at the same time that the "ideals" were being stressed.

The meager experimental studies that are now available are not uniform in their results. On the one hand the studies of Waring and Voelker seem to show that language is a potent factor in influencing conduct. Cook and O'Shea's work, on the other hand, would indicate that there is practically no relation between spelling and knowledge of rules. Butterweck's work would ascribe a certain value to the knowledge of rules of effective study particularly for the brighter pupils, but finds direct practice in the techniques more effective.

These experiments indicate that under certain conditions words are effective controls of conduct, but that they do not necessarily work at all times with the same efficiency. Later experimental work must determine under what conditions words are effective conduct controls. The following analysis of ideo-motor behavior attempts to set up certain hypotheses.

Analysis of ideo-motor behavior. — What then is the process of ideo-motor action? First there must be the idea or verbal response. This is exceedingly important from the educational point of view. One cannot have ideo-motor conduct without first having the idea to act as a stimulus. *Any idea may act as a stimulus to any act.* The idea may not necessarily be the idea of the act. It may be what seems to the outsider a wholly irrelevant idea. James' classic statement that "every representation of a movement awakens in some degree the actual movement which is its object" has been a very misleading statement of ideo-motor activity. Only as one has learned to respond by acting to the idea of an act does such a sequence follow. But what is more important, any idea may cause an act when the connection has been made in experience.

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[1] Voelker, P. F.: *Functions of Ideals and Attitudes in Social Education.* Teachers College Contributions to Education, No. 112, 1921.

The runner is accustomed to assume various postures at the sound of the words "On your mark! Get set!" from the starter, and is off on the word "Go!" The soldier responds to the command "Attention!" in a definite way. Little children are accustomed to let the words of their songs, such as "London Bridge is Falling Down" and "The Farmer's in the Dell," govern their movements. We all carry about with us verbal cues to action. The use of a map in finding one's way about a strange city is an example. One compares street names on the sign posts with the names printed on the map until correspondence is reached. There is a comparison of directions as indicated on the paper with one's orientation in space. Then comes the verbal direction, "I must go in this way for three blocks and then turn to the left for one block." These words are guides to action. Any idea may serve as the stimulus for any act with which it has been associated in the process of learning.

Second, *the particular act of conduct occurring in ideo-motor action must have been made to some other stimulus than an idea in the first instance.* No act is ever originally conditioned by an idea. No amount of *verbal teaching* will bring forth an act, for in the first place the act has to be induced by peripheral means. One may read rules on how to play tennis, but tennis is learned only by getting out on the tennis court and playing day after day. One may teach children the rules for adding, subtracting, multiplying, and dividing, but the processes themselves are learned only by practice. In learning an act the stimuli are many and varied. We try many responses to the various elements of the situation, always choosing those which seem to bring the most success. The normal person has already formed many bonds between ideas and shreds or scraps of activity which enable him to dispense with a pure trial-and-error learning. While learning to play golf one summer the writer was instructed in how to hold the club, and then in how to place his feet. He had already learned how to control his arm and finger muscles in certain gross ways in response to verbal stimulation and how to control his leg muscles "voluntarily." But when it came to swinging the club he found that words did not help so much. Evidently he did not have preformed bonds between words and the swinging movements of the arms. Also movements that he had learned in swinging a baseball bat seemed to interfere. Hence the only way for him to learn these golf strokes was to hit ball after ball and see the results of his strokes. Occasionally his teacher would put his hand on the learner's head to keep it stationary while the latter swung his arms and shoulders, for words did not suffice to attain this control of the head and shoulders.

Golf teachers have discovered that although words cannot control the position of the head, they can control the eyes. Thus the writer's teacher directed him to keep his eyes on the ball, which tended to control both his head and shoulders. But even here his inability to control head or shoulders was too pronounced for his word-eye bond, and he found that he was not successful even in keeping his eye on the ball.

Somewhere along the line all of our acts, even the shreds and scraps, have to be learned independently of words — once learned, ideas may be so associated with the original stimulus that finally words or ideas alone may be sufficient to serve as cues of action.

Before an ideo-motor bond is formed, the cue to activity is some peripheral stimulus to which we are sensitive. This peripheral stimulus has a name, and as the peripheral stimulus starts the act, it also may tend to recall its word or name. This results in a close association being formed not only with the stimulus and the act but between the act of saying or thinking the name of the stimulus and the act. Finally it may be sufficient merely to recall the word or name to initiate the act, the kinaesthetic sense resulting from the verbalization being the stimulus. This is an extreme case. Often the word associated with the original stimulus is not the name of the stimulus but some other implicit activity, some other thought or "image."

Previously formed word-act bonds are used in the learning of new activities. Our past experience may be so verbalized that what apparently is an entirely new experience may be wholly controlled by symbols. Take the new experience of having to find one's way about a certain strange city. For an animal it would be a pure trial-and-error process. But man may have recourse to verbal directions — for example, the map already referred to. Now one must have already learned to read and interpret maps and also to associate what is found on the map with actual spatial orientation. Matters of directions and distance, of walking three blocks and turning to the left, and the like, which may be entirely novel activities in a strange place, are thus quickly and easily learned by this transfer of ideo-motor bonds to new situations. Conduct in the new situation is guided by already formed bonds which were learned previously in similar situations.

A good example of this learning process of forming word-act bonds is seen in the mirror-drawing test. In this test a subject is seated at a table so that he can see the reflection of a star in a mirror but is unable to see the star itself. The subject is directed to trace the star with a pencil. None of the usual cues or stimuli work. All visual cues lead to muscular movements which are wrong. Various resources are open to the subject. One is pure trial-and-error — mere random movement which results in an irregular tracing. Another method is to say, "Left is right. When I apparently want to go left, I must go right." Part of this verbalization is reasoning, and the final word "right" now becomes the cue to activity. Thinking "right" is followed by moving to the right, contrary to visual sense, and the line of the star is approximately traced. When sight suggests "up-left," the subject thinks "up-right" and is again more or less successful. This is a case where preformed bonds between thinking and doing are transplanted to this new situation.

This case of ideo-motor activity is the same as the distinction of the older psychologists between involuntary, voluntary, and secondary involuntary behavior. Involuntary behavior is that reflexive or instinctive behavior whose connections are formed by original nature. Voluntary behavior is that ideo-motor behavior where words are the cues to the acts. Behavior does not tend to stay on the ideo-motor plane or level but tends to gravitate to a second stage where the activity is again dependent on peripheral stimulation. During the process of learning we call on ideo-motor bonds, but soon other cues in the environment tend to relieve the ideas as cues until the newly learned activity seems to work automatically, which means that it is cued by peripheral and kinaesthetic stimuli.

Much education has been reduced to mere association of words with words, while activity or conduct is neglected. There seems to be an implicit belief that somehow what is learned from books will make a difference in conduct. But the formation of ideo-motor conduct is the substitution of an idea for some other stimulus during the course of the act. If the act is never performed, there is never the opportunity to make the association between its stimulus and the word or idea, or to borrow an ideo-motor bond for use in the new situation.

Application to hygiene. — A few decades ago, knowledge of physiology, anatomy, and bacteriology was considered sufficient for the inculcation of health habits. The arguments in Herbert Spencer's famous essay on "What Knowledge is of Most Worth?" were accepted as valid. He says: "If anyone doubts the importance of acquaintance with the fundamental principles of physiology as a means to complete living, let him look round and see how many men and women he can find in middle or later life who are thoroughly well."[1] Instruction in the past has been on the hypothesis that knowledge is sufficient. Today our textbooks inherit from the past. Hence, it is quite possible to find in them knowledge whose only justification is that it is merely knowledge.

The report of the Lake Mohonk Conference on Health Education does not exhibit entire clarity as to the objectives of health education. The following is a quotation from a paper by Dr. C. E. A. Winslow. He is discussing the radical change in hygiene instruction towards a direct inculcation of health habits:

> All this is admirable, but I suspect that we shall soon face a real danger of swinging the pendulum too far. Habit formation should no doubt be our first aim, but it is by no means our only aim. We must also lay a sound basis of knowledge, if the child is to be something more than an automaton. It is not only to learn certain tricks, but is also to acquire intelligence which will enable it to modify its habits to meet the changing conditions of its after life.

Later he mentions six important principles of physiology which are essential:

> (1) It is not important to know the number and the names of all the bones, but it is essential to know something of the structure and interrelations of the parts of the bony system and to understand the structure and the general arrangement of the muscles, if the child is to have an intelligent grasp of what is involved in correct posture, if it is to comprehend the real value of exercise, and if in future life it is to respond intelligently to the professional advice of the orthopedist.
>
> (2) A knowledge of the mechanics and the chemistry of digestion is vital to the continued maintenance of sound elementary habits, and only a real knowledge of the elements of nutrition will make possible a judicious appraisement of the dietary fads and fancies with which the citizen of the future is likely to be confronted in increasing degree. Under the general heading of the digestive system we may also mention the importance of some conception of the structure of the teeth and of the process of dental disease, which will facilitate future utilization of the resources of dental hygiene.

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[1] SPENCER, HERBERT: "What Knowledge Is of Most Worth?" Lectures on Education Delivered at the Royal Institution of Great Britain, London, 1855.

> (3) A clear conception of the physics of the circulation is basically important for any conception of the effects of the atmospheric envelope upon the body and for a rational control of the effects of this atmospheric envelope through ventilation and clothing.
>
> (4) A knowledge of the ways in which wastes are eliminated from the body is fundamental in avoiding constipation and in maintaining the kidneys in a healthy condition. Here, as in the case of the circulation, it is through a real knowledge of the machinery involved that the individual will be disposed to take the fullest advantage of medical counsel bearing on the postponement of the degenerative diseases of later life.
>
> (5) A vital conception of the structure of the nervous system furnishes the only sound basis for intelligent mental hygiene, for habit formation, rather than the learning of tricks like a pet dog, and for the adjustment of work and rest so as to insure a maximum of productive performance. The practical hygiene of the eye and ear requires an intelligent comprehension of the structure of those complex but frequently defective appendages of the central nervous system.
>
> (6) Finally, under the general head of physiology, the pupil should be given an elementary view of the cyclical changes in the human body, of the ways in which developmental and degenerative diseases arise, and of the possibilities of medical science as applied to the early detection and hygienic treatment of incipient disease.

This lengthy quotation has been included because there is doubt as to its implications. If this writer means that this knowledge will lead of itself to habit formation, I believe he errs, — knowledge possesses no such impulsive quality. It may be truly asserted that practically no child will learn habits of regular bowel movement from a "knowledge of the ways in which wastes are eliminated from the body."

When one comes to examine hygiene texts and readers for children, the confusion in aims is intensified. At times their purpose is apparently nothing more than that of giving anatomical or physiological information. One is left in doubt as to the function of this information. Again rules of healthful living are given with the implication that these rules, often requiring tools, materials, and acts of skill, will be put into practice. These quotations are selected at random from several modern hygiene-physiology texts:

In an immovable joint the bones are firmly united by a piece of cartilage that grows between them. In a movable joint, a thin layer of cartilage covers the end of each bone, and this is kept lubricated by an oily fluid. This enables the joint to work smoothly.

The nervous system is made up of nerve cells and of nerve fibers. The nerve cells are larger than most of the body cells. Most of the nerve cells are found in the brain and spinal cord, but a few of them are found in the ganglia.

The mucous membrane, which lines our stomach and bowels, is made up of two layers: a deeper sheet, woven out of tough strands of fibrous stuff (derma); and a surface layer (epidermis) composed of cells lying side by side like the bricks on a pavement, (epithelial) cells.

As examples of information which might lead to conduct, the following are quoted:

A very short hot bath will lessen fatigue, because it will stimulate the circulation of the blood and in that way hasten the removal of the fatigue poisons.

Note here that knowledge of "circulation of the blood and fatigue poisons" are already known. They must have been learned at a time when their immediate value as knowledge was not realized.

In the eyelids are glands, which sometimes become diseased, and the secretion from them forms scales around the roots of the eyelashes. The trouble is that germs are growing in the gland. Dropping a solution of boracic acid into the eyes will help to kill the germs.

You cannot see the youngest layer of the nail cells at the base, because the nail fold has been folded over them. It is not best to push this fold of skin back too much, as you may expose the young nail cells to injury while they are tender.

It must not be expected that such information, however, will lead to the action desired. But such information may be a stout ally to bolster up habits already started, or to tell us what to do when the normal processes of the body go wrong.

Application to thrift. — Somewhat the same condition holds true in the education for thrift. Most education for thrift taught in school is contained in the arithmetic course. Consider the following two methods for teaching fire insurance. The first is taken from a currently used text in junior high-school mathematics:

APPLICATIONS OF PERCENTAGE

74. Insurance. A property owner may protect himself from loss by *insurance.* For a small per cent of the amount insured an *insurance company* will agree to pay the owner for his losses if the property is destroyed or damaged by certain agencies.

The contract between the insurance company and the person insured is called a *policy.*

The amount to be paid in case of loss is called the *face* of the policy.

The amount paid to the insurance company for the insurance is called the *premium.*

The premium is usually computed at a certain rate on each $100 insured for a given period. The periods most frequently used are one year, three years, and five years.

Three common forms of property insurance are *fire* and *lightning, tornado* and *marine.*

By examining the records for a period of years an insurance company can determine with a high degree of accuracy the probable number of fires that will occur in a certain kind of location, as on farms, in villages, and in cities. From these facts the company can compute the premium to be charged to allow for losses and to secure profits. The probability of fire, and therefore the rate of insurance, depends upon the kind of building, as wooden or brick or stone, the fire protection, the nearness to other buildings, the use of the building. If the number of fires increases, the insurance company will increase the rate of insurance. As losses must be paid from the premiums collected, it is to the advantage of every person insured to improve the protection from fire and to do everything possible to reduce the loss by fire.

In life insurance the insured pays an annual premium, in return for which the insurance company promises to pay to the insured or to someone he designates, a certain sum of money, either after a certain number of years or at the death of the insured.

Exercise 81

1. A dwelling house valued at $6000 is insured for $^4/_5$ its value for 5 years at $1.50 a hundred. Find the premium.

2. Some farm buildings valued at $3500 are insured against fire and lightning for $^3/_5$ of their value for 5 years at $1.75 a hundred. Find the premium.

3. If the property in the last exercise is insured also against tornadoes the rate is $2.50 a hundred. Find the premium in that case,
etc., etc.

Compare this archaic deductive method with the following method proposed by Thorndike in his *The Thorndike Arithmetics*, Volume III:[1]

36. PROTECTION AGAINST LOSS OF PROPERTY BY FIRE.

Arthur spends 25 cents a year to insure his hen house against fire. If it burns up Arthur will get $40 to use in building another.

1. Do you pay anything for insurance against loss by fire?
2. Does your father?
3. If you have known something useful about life insurance, fire insurance, accident insurance, insurance against theft, or insurance against sickness, be ready to tell it to the class clearly.
4. At the McKinley School they play "Insurance" this way: One pupil is "Fire." The property to be insured is the written work of the test printed on pages 36 to 38. Each pupil does the work of the tests and puts his paper in a pile on the teacher's desk. "Fire" comes to the desk with his eyes shut and destroys one of the test papers. If that pupil is *not* insured, he has to do the 20 problems all over again after school. If he *is* insured, "Insurance Company" has to give him 20 problems all solved to use in place of the test paper. The pupil whose paper is lost gives these 20 problems to the teacher and does not have to do the test problems again. To be insured a pupil has to solve one of the extra problems and give it to "Insurance Company." "Insurance Company" uses the problems he receives from the other pupils to pay for the losses caused by "Fire."

With the help of the other pupils, "Insurance Company" writes out for each pupil who pays him a problem an agreement like this:

Policy No. 26 Premium, 1 problem
......................10 A.M.
The Seventh-Grade Insurance Company agrees to insure......................to the amount of 20 problems against the loss of his test paper by fire within five hours from date.
Signed,
....

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[1] THORNDIKE, E. L.: *The Thorndike Arithmetics*, III: 41, 42. Rand McNally & Company, 1924.

An insurance agreement like the one at the bottom of page 41 is called *a policy.*

The amount that the Insurance Company may have to pay is called the *face.*

The amount that the pupil who is insured pays is called the *premium.*

The length of time during which the pupil is insured is called the *term.*

5. What is the face of policy No. 26?
6. What is the premium?
7. What is the term?

Exercise

41. INSURANCE: RATES.

(Without pencil)

1. Plan a game of marine insurance in which pupils can be insured against having a composition destroyed by "Storm" or "Fire at Sea" and having to rewrite another by paying "Insurance Company" an extra sentence correctly punctuated or an extra exercise in language.

etc., etc.

The difference between these two methods in teaching insurance is apparent. The first assumes that insurance may be taught as a logical exercise. One never knows whether the authors intend the topic to be subsidiary and the computation of first importance or *vice versa.* Presumably the first authors hoped to teach something about insurance or they would not have included definitions and a description of insurance principles. The second illustration definitely proposes to teach by doing and then, having established the process, connects the process with words. Habit formation comes first, then words may be associated with the activity which later may serve as aids to initiate and carry on that activity, or the subsequently derived activities.

Application to study. — The same tendency toward verbalization of instruction may be seen in the methods of teaching how to study. Many schools post bulletins or placards with rules of efficient study; other schools give each pupil a card or printed sheet to be posted in the front cover of books or kept in convenient places; still others include study advice in the school handbook. For the greater part, these rules probably go the way of most printed rules. While some students who are truly anxious to learn and have strong ideo-motor habits set up may profit by such rules, the great majority pass them by. One such set of rules is quoted for illustration. This is a set of "study helps" used at one time in the University of Chicago High School:

> The habits of study formed in school are of greater importance than the subjects mastered. Following suggestions, if carefully followed, will help you make your mind an efficient tool. Your daily aim should be to learn your lesson in less time, or learn it better in the same time.
>
> 1. Make out a definite daily program, arranging for a definite time for each study. You will thus form the habit of concentrating your thoughts on the subject at that time.
>
> 2. Provide yourself with the material the lesson requires; have on hand maps, ruler, compass, special paper needed, etc.
>
> 3. Understand the lesson assignment. Learn to take notes on the suggestions given by the teacher when the lesson is assigned. Take down accurately any references given by the teacher. Should a reference be of special importance, star it so you may readily find it. Pick out the important topics of the lesson before beginning your study.
>
> 4. In the proper use of a textbook, the following devices will be found helpful: index, appendix, footnotes, maps, illustrations, vocabulary, etc. Learn to use your textbook, as it will help you to use other books. Therefore, understand the purposes of the devices named above and use them freely.
>
> 5. Do not lose time getting ready for study. Sit down and begin work at once. Concentrate on your work, *i.e.*, put your mind on it and let nothing disturb you. Have the will to learn.
>
> 6. In many kinds of work it is best to go over the lesson quickly, then to go over it again carefully; *e.g.*, before beginning to solve a problem in mathematics, read it through and be sure you understand what is to be proved before beginning its solution; in translating a foreign language, read the passage through and see how much you can understand before consulting the vocabulary.
>
> 7. Do individual study. Learn to form your own judgments, to work your own problems. Individual study is honest study.
>
> 8. Try to put the facts you are learning into practical use if possible. Apply them to present day conditions. Illustrate them in terms familiar to you.
>
> 9. Take an interest in the subjects taught in school. Read the periodical literature concerning these. Talk to your parents about your school work. Discuss with them points that interest you.

10. Review your lessons frequently. If there were points you did not understand, the review will help you to master them.

11. Prepare each lesson every day. The habit of meeting each requirement punctually is of extreme importance.

Schools that have tried codes of this kind report their usefulness, but Butterweck's study already referred to on page 127 indicates that this method is not so efficient as a more direct attack on the study habits themselves.

Much more can be accomplished by definite conduct guidance, accompanied by verbal advice. For instance in (1) of the above list of rules, instead of suggesting that each pupil make out a definite daily program, one may have cards provided for such programs and have a definite campaign for two or three weeks in which such daily schedules are filled out daily and checked by the teachers at the end of the day to see how well the schedule has been followed. If we really expect boys and girls to form the habit of making and following a daily schedule, such opportunity must be provided, for merely to suggest that it be done will be insufficient. The same is true of note taking, to use another example. It is not sufficient to suggest that it be done — notebooks must be in the hands of each pupil, the technique of note taking must be carefully supervised until it becomes habitual.

As a matter of fact, it is to be doubted whether the school authorities ever really expect some of these rules to become habits. If all the rules of note taking, reading and re-reading, outlining, underlining, discussion, etc., were really made habits, study would become an intolerable burden. To repeat from the last chapter, before we expect habit formation we must be sure of the validity of the habits.

Application to moral conduct. — With regard to moral training again there is no clear-cut experimental evidence. In support of the position taken in this chapter, a position for which there is no direct experimental evidence in the field of morals but some evidence in more elementary psychological fields, two sources are quoted. Thorndike says:

> Many thinkers about moral education have assumed the truth of the ideo-motor theory and so have trusted that presenting stories of noble acts was such a universal means of ennobling conduct. . . . The logical consequence of this doctrine is confidence that tales of heroism, thrift, sacrifice, studiousness, and other virtuous deeds will tend to create them in the hearers — will surely create them except for the existence of ideas of contrary acts or strong contrary habits. . . . This confidence that an idea will be realized if only we can get it into the mind and keep the opposite ideas out, has as its consequence, in turn, the expectation of vast moral improvement from the study of literary descriptions of virtue, the subservience of the scientific and practical aims to the moral aim in the teaching of history, and in the end the deliberate insertion in the curriculum of subject-matter chosen because it gives impressive ideas of good acts and so, supposedly, creates them. . . . It is, however, obvious to sagacious observers that ideas of good acts do not always, or even perhaps often, create good acts in this easy way, and that the effect in any case varies greatly with the individual and with the sources of the idea. . . . Successful suggestion toward an act consists in arousing, not the state of mind which is like that act, but the one which that act follows by instinct or habit, and in preventing from being aroused the state of mind or body which some contrary act so follows.[1]

C. E. Rugh in his essay, "Moral Training in the Public Schools," says:

> MAXIMS: THEIR POWER AND USE
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> The advocates of moral and religious training have relied mainly upon moral maxims, rules, and commandments. Students of biography are struck with the readiness with which great men like Socrates, Jesus, Franklin, Washington, and Lincoln applied the appropriate maxims to trying situations. The erroneous conclusion has often been drawn that the uprightness and power of their lives was produced by these formulas, whereas the truth is that these maxims are the products of their lives. This singular inverting of the process is another example of the effort to put old heads on young shoulders, or translated into the new psychology, to put old brains upon young spinal cords. It is quite possible to run the words of those maxims into the brain, either through the eye as letters or through the ear as sounds, and even to have them run out again through hand or

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[1] THORNDIKE, E. L.: *Educational Psychology*, Vol. I: 289–292. Teachers College Bureau of Publications, 1913.

mouth, and yet they may have no power over the life. The words of the Ten Commandments or the Golden Rule may run through the language machinery of the child and not rise into the higher regions of thought or run down into the nerves and muscles of action. The Golden Rule does not tell us what to do in a particular situation, and has no power to make us do it if it did. Maxims, rules, commandments, are generals, not particulars, and like all generals, come at the end of a teaching process to be carried over into action under new situations.[1]

Enough illustrations have been given to show that a habit of conduct must first be obtained by some means independent of language. Language may play its part insofar as bonds have been previously formed between words and scraps or elements of the habit to be formed. But the act will not spring full grown from verbal instructions or exhortation — other stimuli must also play their part.

If, however, we wish to have ideo-motor bonds serve in some new situation, then we must form these ideo-motor bonds during learning. So every act of learning should, as far as possible, have accompanying or following it, a verbal description of the process, a naming of the attendant stimuli. Then when this habit is to be used as a factor in some new act of learning the old habit may be readily stimulated and controlled by the words which have been made cues to its initiation.

Ideo-motor conduct a transition phase. — Finally, what of the importance of ideo-motor conduct? Ideo-motor conduct is a transition phase of conduct. It is a kind of conduct which for human beings ought always to be on the frontier of a new experience or a new process of learning. Animals can hardly control their conduct by ideation. Except in the higher primates there is no evidence that animals have any ideational (word or symbolic) experience whatever. Their learning has to proceed in a purely trial-and-error way. Man's superiority to animals is due to the fact that he can short circuit his trial-and-error learning by the use of words. It would be folly to expect habitual conduct to be ideo-motor. The passage from James quoted in the last chapter shows the need for the automaticity of habitual conduct which derives its cues from peripheral and kinaesthetic stimulation. But in order that we may facilitate learning in new situations, we wish to have our old acts and habits well associated with words which may serve as cues in the newer learning and activity. The most intelligent man is one who has his conduct on a habitual plane in its routine phases and yet has a large stock of ideo-motor bonds by means of which he approaches unfamiliar circumstances. The untutored man approaches new situations with only external cues as stimuli. The man who has had only traditional verbal education approaches a new situation with plenty of words but words which are useless because they have no associations with the realities of experience.

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[1] Rugh, C. E.: *Moral Training in the Public Schools — California Prize Essays.* Ginn and Company, 1907.

The idea-governed man is he who has learned habitually to act on the basis of his ideas. He may allow his customary acts to be controlled by peripheral stimuli but the *direction* of his day's activities is internally controlled. His life appears to be controlled or guided from within. Such a man may well be contrasted with the person who is continually at the beck and call of every outward stimulus. In the case of the latter, all the fads and fashions impel, every light and sound has its suggestion. Such a man runs with crowds, is greatly swayed by praise or blame, must be amused by others, and has no resource within himself for the passing of leisure time.

Ideo-motor action occupies a peculiarly significant position in human behavior. It is seldom the resting stage of habit. It occupies that frontier position which is best seen in the man who leads an active life which is governed by reason.

Summary. — Most conduct is conditioned by peripheral stimuli. But words or thoughts may also act as the cues of conduct. Our first response to words as stimuli occurs when the words are spoken to us by others; but as a baby learns to talk he may transfer his responses to words from those spoken by others to words or thoughts of his own. Any idea may act as a stimulus to any act. The particular act of conduct occurring in ideo-motor action must have been made to some other stimulus than an idea in the first place. This is often overlooked in school instruction where it is frequently assumed that words have a magic potency for guiding conduct. Ideo-motor action is typically used in unfamiliar situations when our responses to peripheral cues fail us.

CHAPTER VII

THE PLACE OF REASONING IN CONDUCT

The use of symbols — Response to subtle factors — Recall of abundant associations from past experiences — Organization — Choice of clues — Importance of intelligence — Types of reasoning — Reasoning in the guidance of conduct — Reasoning not necessarily leading to conduct — Ideo-motor bonds in the service of purpose — Applications to education — Verbalized activity — Concepts to be taught — General principles to be taught — Importance of knowledge in reasoning — Practice in specific field in which reasoning is done — Health problems — Personal problems — Social problems — Moral problems — Summary.

The last chapter has paved the way for a discussion of the place of reasoning in conduct. Reasoning is not called for nor used when habit is sufficient. A life on the habitual level does not need reasoning. Reasoning occurs only when habitual performance is inadequate and does not satisfy. If some small change in the situation throws out of gear a habitual process, then reasoning may come in to bring the activity back into satisfying channels again. A person unconsciously reaches his hand into his pocket for the keys with which to unlock his office door and finds that they are not there. The normal habitual process of taking them out and unlocking the door is broken. His activity comes to a halt. This situation demands his attention, and reasoning may follow. We say *may* follow, for if for any cause his reasoning is insufficient, he may resort to trial-and-error behavior — a mere trial of various reactions of which he is capable that have previously been called up in similar situations. Reasoning is also trial-and-error behavior but not of the same kind as that just mentioned in that symbolic mechanisms (kinaesthetic) are used to short circuit overt activity. Usually these mechanisms are verbal. Animals which have no mechanism for reasoning are forced to use trial-and-error activity in every new situation. Man uses gross trial-and-error if the situation has few or no aspects of familiarity or is very complicated; and reasoning, if his past experience and neural mechanism are sufficient to enable him to reason effectively.

Use of symbols. — Words or symbols play an important part in reasoning, as a substitute for actual performance, which is a long process. This substitute must necessarily be some reaction which has been associated with the actual performance, and which may be re-enacted quite independently of the original setting. Words fulfil this function admirably. Words are associated with actual performance, events, objects, relationships, etc., until they come to have meaning or reference. By the use of words one can relive past experience *in absentia*, and can recombine past experiences into new combinations or relationships (as in dreams). Words short circuit actual behavior. By means of words or other mental symbols one can review previous experiences for the purpose of estimating their adequacy in the present situation and its need. In animals when there is imperfect adjustment to the present situation, the only recourse is to let one or another feature of the situation arouse whatever overt responses are in the animal's category of responses. Man would have to do the same, were it not that his previous experience has been associated with words or other symbolic reactions and that he can review his experiences symbolically rather than by the more lengthy process of trying the actual experiences themselves. It is not that animals do not remember. If they lacked memory in the case of need they would be unable to make any other response that they had learned in their past experience or that instinctive equipment provided them with. But their memory is not symbolic. Man can repeat his experiences by verbal or other mental symbols that have meaning for him.

Response to subtle factors. — A second factor in reasoning is the response to subtle elements in the situation. Insofar as man makes analyses of the situation and lets small, unobtrusive, subtle factors in it act as stimuli and insofar as he has unique responses to these small and subtle factors, his reasoning is good. The automobilist looks at his engine when it refuses to work and sees only an undifferentiated mass of bolts and nuts, disks and cylinders, rods and wires. He has not learned to respond in particular to any specific part. The mechanic comes along and gives his attention to parts. He inspects the gas and oil gauge, the spark plugs, the magneto, the carburetor, the wiring. To each element he has a different set of responses and his piecemeal activity is much more likely to succeed than the bungling efforts of the man who is ignorant of mechanical parts. If, besides his knowledge of the engine, the mechanic can run the engine and cover in his mind the various possible defects that can cause this possible knock or miss, he will go immediately to the one or two critical points in the engine and locate the trouble without delay. This is reasoning. Not only are words used which, calling on past experience, eliminate otherwise random tinkering, but these words are connected with specific parts of the engine. Successful reasoning implies a piecemeal knowledge of the situation. Words which name elements of any situation are called concepts, and reasoning makes use of concepts.

Recall of abundant associations from past experience. — Reasoning is a search for fruitful cues. Immediately on failing to find the keys in his pocket a person starts a mental search. "When did I last have them? Yes, I opened the door to my house last night, so I had them then. I must have placed them on the hall table or on my desk. Shall I go back and get them? That would be expensive in time. Perhaps I can find someone about here who can let me in. The night watchman certainly has a master key; or, better still, the scrub woman, who opens the windows and dusts my desk every morning, has a pass key

I will find her." This last sentence is the key to activity, — symbolic reaction stops, and an active search for the maid is begun. Thinking probably does not proceed in any such complete and grammatically perfect form. There are phrases and words, one suggesting another, with a turn of the head, a shrug of the shoulder, or a roll of the eyes to help them along. In this process the person concerned probably tried out various plans, went through the processes mentally and proceeded on the basis of the imagined result until one course of action above all others satisfied him.

Organization. — Reasoning is usually more than a serial recall of associations or clues. These associations must be ordered, catalogued, arranged. The elements of the situation must fall into categories. There must be an arrangement by genus and species. It is not enough merely to list the associations. The automobile mechanic must do more than inspect the parts of the engine in order successfully to solve the riddle. He must know the *function* of the parts, and how one part depends on another. The relationships of the several parts of the mechanism must be ordered in his own mind. Without this web of interpenetrating associations reasoning must assume much of its gross trial-and-error character.

Choice of clues. — The search narrows down. Many suggestions that occur are rejected until one course of action is left which satisfies more than the rest. We are constantly rejecting or accepting our verbal suggesting; and without some guide or check on our responses reasoning would entirely lose its value. If the unfruitful as well as the fruitful clues evoked our acceptance the reasoning process would be reduced to folly. It is just this matter of having a definite goal and recognizing those points which in past experience have been *more or less* successful in leading to the goal that is a prime factor in reasoning. This inner process whereby goals are maintained which give us standards of judgment will be given fuller treatment subsequently.

Importance of intelligence. — Intelligence shows in all five steps of the reasoning process. That man is intelligent who can readily symbolize his experiences, who can attend to minute and subtle elements in the situation, who can recall abundant associations from his past experience that bear on the present situation, who can arrange these associations in fruitful ways, and who from these many associations is able to sort out those which are worthless and those which have promise of usefulness.

Types of reasoning. — Reasoning does not follow a set order or pattern. It may assume several forms according to the purpose or subject matter at hand. One may perform any one of the steps of the reasoning process without solving a problem. One may *analyze* (as when the anatomy student analyzes a cell under the microscope) or *classify* (as when the naturalist collects specimens of plants or insects and classifies them), or merely be content to *see resemblances* or *differences* (as when the student is asked to compare the style of two authors or to contrast the work of two statesmen). There is the kind of reasoning which attempts to *justify* or *explain relationships*. One may ask why one should refrain from the use of alcoholic beverages or why one should wear buttons on one's sleeve. This type of reasoning often takes the form of *rationalization* or self-justification. We do not reason before we act; we act and then try to fit the reasons to our behavior. Then there is the kind of reasoning which tries to *prove* or *disprove* some asserted principle or relationship. In this case we start with the general principle and attempt to find specific facts which will or will not substantiate the major premise. Finally there is *problem solving* which starts with a particular situation and then brings in general principles which may suggest a solution.

Reasoning in the guidance of conduct. — The kind of reasoning which may guide conduct is simple problem solving. First there is a given situation where habitual activity is blocked. In such a situation one searches around for general principles that will give the solution. A door refuses to open. Unreflective behavior causes one to push against the door, kick it, beat against it, or go away to get someone else to open it. Reflective behavior proceeds to inspect the door more closely. It evidently is not locked because it can be pushed open slightly where the lock is. Here the general principle, "A locked door will not give way where the lock is," has been employed, a principle that has been learned from experiences with many doors. A further observation is made that the door gives at the bottom but not at the top. Past knowledge or experience is then drawn upon. A man uneducated but with much experience with materials will not be able to tell in words what is the matter but his past habits will give him the right cue. The educated man will recall what he knows of friction and pressure, will recall that "less pressure means less friction," and with "bearing down will lessen the pressure" as a clue that seems to apply, will bear down on the door knob and open the door easily. The steps may be summarized as follows: (1) a situation where habit does not work; (2) attention to details of the situation; (3) recall of associations in the form of general principles which apply; (4) rejection of one principle after another until one which seems hopeful appears; (5) and further associations between elements of the situation and specific acts which will change it. In this case the final association is "to lessen pressure at top of door bear down on knob." This association may be the cue to activity. Usually, in reasoning, the bonds act in rapid succession and in a way they reinforce one another. The automobile mechanic "thinks with his tools." If the trouble seems to be in the spark plugs he immediately applies the wrench and then what he sees when the plug is unscrewed suggests what next to do. Practical thinking is a rapid oscillation between doing and associating.

Reasoning does not necessarily lead to conduct. — Even the satisfactory solution of a problem is no guarantee that the solution will be put into effect. It was one thing for Dawes and

Young to derive a scheme for the economic rehabilitation of Europe; it was another thing to have the various nations agree to accept it and put it into practice. Solving a problem is purely an intellectual exercise. It is merely a repetition of words, of previous but now symbolized experience. It is true that reasoning may be helped by external aids, — by manipulation, by sensory clues, etc., — but the essential feature of the process is a symbolic sort of experience, a reliving and recombining of old experiences. Unless ideo-motor bonds are present reasoning will not issue in conduct.

Not too much should be expected even when a pupil has been taught to solve problems relating to conduct. Though we teach boys and girls to reason about their bodily machine, we need still to consider the problem of how to turn this into conduct. A boy may be taught why it is wrong to shoot birds, but his understanding of the reasons may be of little avail when he is in the woods with his air rifle and in the company of his friends. If the matter comes to an issue, habit will be stronger than reason in determining conduct. When, then, is reason of value in guiding conduct? When *reason can serve in furthering one's purposes and plans in an enterprise which is blocked.* One cannot divorce the discussion of the place of reasoning in conduct from a consideration of drives, motives, purposes. Certain of our motor activities in response to peripheral stimuli are so easily learned as to seem instinctive or innate. Not so with conduct based on reason, however. These highly developed and specialized reactions which we call voluntary and which issue from the cerebrum are the product of learning. Being such, they await the demands of motive or purpose. It is strange how much of the reasoning carried on in school is simply a mental exercise with little or no relation to its issue in conduct. More time should be spent in school in creating worthy desires so that the reasoning that is done might have a chance to function as conduct. The successful insurance salesman spends more time in making a prospective customer feel the need for insurance than he does in working out problems in insurance. One can teach a child why he should wash his hands before meals, but it takes more than the understanding to get him to do it.

Practice in problem solving should not be neglected in favor of increased motivation. Oftentimes the perfection of a skill is a most potent motivating force. One may have great difficulty in motivating a child to practice on a musical instrument until some skill is attained which seemingly goes back to feed the motive. Skill in solving conduct problems certainly helps in motivating reasonable conduct.

The purpose or motive does not define the reasoning, however. It simply calls for reasoning of some sort which can be used as a guide to activity in the annoying or blocked situation. One may act on superstition as well as on correct ratiocination. Many people will not raise an umbrella in the house, will not boast of their good health, will not let a tree or a post separate them from their friend on a stroll because of an uncritical acceptance of faulty reasoning. Education must see to it that reasoning is correct — the purpose or motive does not govern that.

Applications to education. — What are the applications to education? First, all experience should be verbalized as far as possible. This is a conclusion from the last chapter. Inasmuch as symbolizing activity is man's unique method of short circuiting overt activity it should be utilized to the utmost. Schools have been so eager to do this that they have gone to the extreme of giving the words without giving the experience. Words without the experience which they signify are barren. One finds it most difficult to teach words such as "glaciers" in a tropical country because the children there not only have never seen a glacier but have no concept of snow or extreme cold. These are merely barren words to them. Erosion and volcanoes, on the other hand, are very easily taught there because they are in everyday experience. The experience must come first; then words should accompany so that the experience may be condensed, stored away, and made available for future use in emergencies.

Second, and much akin to the first, a person must be taught to respond to minute details, factors, elements of a situation. Science is a process of analysis, of breaking up into parts, of noting each separate element. Is it the blood that is being studied? Then its color, specific gravity, and chemical composition are noted. It is put under the microscope, and its cells are analyzed. These are of different types and are minutely described. The movement of the blood and its changes in composition at different stages of the process of circulation are studied. What to the onlooker is mere blood becomes to the physiologist a mass of interrelated elements. In this process of analysis many *names* are necessary so that verbalization may take place.

Teach general principles. — Thirdly, for effective reasoning, a person must be equipped with a well-organized and generous stock of general principles. These may range from general principles of a specific nature such as "to cool a room open the window," "to tell the time look at the clock," "in case of burns apply soda" to those of a more general nature such as "pressure and volume in a gas are in inverse proportion," "bright children tend to work less hard in school than dull children." Many of these general principles, being the rules of everyday life, will have been acquired in the course of general experience. But many would never have been discovered without the precise methods of science, and it is to impart these that formal school education is largely devoted. Here again cautions are necessary. Verbal generalizations alone are quite ineffective. Unless in some way connected with experience they will never be recalled in a specific situation. And were they actually recalled by chance their significance would probably not be felt.

Importance of knowledge in reasoning. — The deduction of habits of hygiene from physiological knowledge is most difficult, however simple the habits may seem. These correct deductions from physiological principles to conduct habits can only be made by the most intelligent individuals. Hence it is a question as to just how difficult a problem of this sort a child of a given age can solve with the information and observations clearly at hand. Few adults are able to reason out for themselves the true cause and remedy for their disorders. The widespread use of patent medicines and other quackery indicates how little adults have drawn on available knowledge. Most of us are quite willing to accept and use rules of health as we find them. Very few of us pick up physiologies and try to deduce health habits from them. Should we expect more of school children?

It is a question, therefore, whether to put the solution of problems in the text in the form of simple rules or whether to give the necessary physiological information and allow the children to reason out the solution for themselves with the accompanying practice in problem solving. Most authors of hygiene texts adopt a middle ground. They certainly fill the text with rules and guides for conduct which a skilful author might have put into the form of problems. And as problems they ask questions to which the answers might better have been told outright in the text, so involved is the reasoning leading to their solution. As an example of the former the following is offered:

> The flowing of blood can often be checked by pressing the thumbs firmly down on both sides of the wound upon the blood vessel that has been cut. Sometimes it is necessary to twist a knotted handkerchief tightly around the limb with the knot over the bleeding vessel, and press upon it, as in the picture on the opposite page. If the blood is of a bright red color, and if it comes in jets, in tune with the heart beat, an artery has been cut, and the handkerchief must be tied between the heart and the wound in order to stop the blood flow.

This is admirable material for problem solving following a study of the circulation of the blood — the reasoning needed is rather direct and obvious and not difficult. On the other hand, consider this problem: "Why is the use of the minor muscles exhausting to the nerves, while the use of the major muscles strengthens the nerves?" The principles concerning the interrelations of the circulation of the blood, muscular activity, and tone of the nervous system are so involved and so important that more would be gained by telling outright these facts than by offering this possibility of misconceptions.

As a matter of fact, a great many of our rules of health are not easily deducible from physiological or anatomical principles — they are based on experimental evidence, and the physiological principles underlying are still hidden from us. Almost all of our knowledge of food and eating comes to us from experimentation and not from deductions from our knowledge of the workings of the alimentary system. Likewise our knowledge of mental hygiene comes from experimental procedure and not from deductions.

After all, perhaps the best that the school can do along the line of problem solving in hygiene is to present a few very general problems which either recur again and again in experience or have solutions that recur again and again. Such are: going to a doctor when ill, the dependence of return to health upon the adoption of correct habits of living, the dangers of patent medicines, the need for frequent physical examination, the results following use of drugs and intoxicants, and above all the information as to where information can be had when accident or ill-health occurs.

Where definite habits are not sufficient to make daily life efficient, it is best to present a few general problems constantly recurring in experience, or problems which have solutions that recur again and again. Among these are knowing where to go for advice about employment and investments, the avoidance of quack purveyors of cheap success, wealth or what not, the use of bureaus and guides for the giving of advice, and the use of account books, budget schemes, files, and memoranda devices for personal efficiency. It may not be possible to teach people to reason out the effects of their own conduct, but it is possible to teach them to use a great many solutions which have been discovered by others.

Perhaps the greatest service that reason can offer in the guidance of conduct is in *planning* and *executing*. The aviator planning a transatlantic voyage or the housewife planning to redecorate a room draws on the solutions of technical problems that have been discovered by others. The main task for each is the assembling of these solutions, and planning to execute them most efficiently. The average college student will not discover a new technique for efficient study. He can best demonstrate his superiority by appropriating available devices and carrying them out according to plan.

Practice in specific field in which reasoning is done. — Fourth, there must be practice in seeing relationships in the very fields where reasoning is to be done. One may have had much experience so that he is equipped with an abundance of relationships, these relationships or general principles may be well organized, one's memory may be excellent, yet without practice one may not be able to recall the proper principle. In geometry a student may know every preceding theorem and yet fail to see that any certain principle or theorem applies in the problem at hand. There is no substitute for much practice in reasoning in a given field, if this reasoning is to be effective. With regard to conduct there must be practice, systematic and controlled, in estimating the results of behavior.

Teaching independence in testing correctness of reasoning. — Fifth, the student must be taught to be critical of his own reasoning. Here again practice is necessary before the habit of testing one's own reasoning processes is built up. In the elementary school little children, unless specifically taught, will not learn to check their own problems in arithmetic. They will learn on the teacher's indication of the correctness of a problem, and inasmuch as from the teacher come the rewards and penalties for school work there is no need for any further check. But we expect persons to have resources within themselves for testing the correctness of their problem solving. The writer recently heard a graduate student maintain that a certain technique in educational experimentation is sound because "it would be approved by educational authorities." This is merely a repetition of the child's reliance on authority. From little children to the most profound scholar, all need to be able to estimate the worth of their surmises.

Health problems. — In actual living a problem naturally arises with regard to health when something goes wrong with the functioning of the body. Perhaps it is an accidental injury; perhaps it is fatigue, heart trouble, or hardening of the arteries; or perhaps through failure to observe some rule of health, suffering results from anemia, indigestion, or poison secreted within the body. At any rate, as Dewey has so plainly shown us, we have to think when the situation arises in which our habits do not offer satisfactory solutions. This is a time when knowledge is of value in forming the right habits. Without knowledge the habits established might be those of taking a patent medicine, or of practising auto-suggestion, but knowledge of correct physiological principles might give the understanding by which the sufferer could infer the line of action which would restore normal conditions again.

The question which most often arises in practical experience is, "What should I do?" Such questions are sprinkled through the Stanford Revision of the Binet Scale. "What must you do when you are sleepy?" "What's the thing for you to do if it is raining when you start to school?" "What's the thing for you to do when you have broken something which belongs to someone else?" "What ought you to say when someone asks your opinion about a person you don't know very well?" Similar questions in hygiene would be, "What's the thing for you to do when you feel a cold coming on?", or "How can I relieve a headache?", or "What should you do for a fainting person?"

The unthinking solution of a problem is the trial-and-error solution. The use of household remedies illustrates such a solution.

The rational solution of such problems as those given above involves three main processes: (1) ability to observe the situation objectively, carefully, minutely; (2) knowledge of rules and principles and facts relevant to the solution at hand; (3) ability to see the relationships and to draw conclusions. These three partial processes are essential to the solution of a practical problem and each process is independent and needs special attention by itself. First of all, the student has to learn to observe in an objective way the essential features of various situations influencing health. Then he needs to have at hand a stock of valid rules and principles and facts. He also needs practice in seeing the application of general principles and facts to particular circumstances.

In the examination of two texts, one a beginners' text in hygiene, the other a high-school text in physiology and hygiene, it was found that the questions roughly grouped themselves into the following categories:

CATEGORY	ELEMENTARY TEXT	HIGH-SCHOOL TEXT
Observation	31%	3%
Explanation (why?)	27%	27%
Personal preference	4%	0%
What must one do?	4%	0.4%
Fact (is what? where? when?)	22%	50%
Relationship (what is the difference? how? compare? which?)	12%	21%

It will be noticed that the most important form of question, the "What must one do?" type, receives scant attention. The "Why" question tells the solution to the practical situation and then asks for the reasoning leading up to the solution. The "Why" question lacks the motivation that the practical question has. The difference between the "What must one do?" question and the "Why" question is the crux of the difference between the project method and the older problem method. The latter method usually demanded an explanation and hence contained only an intellectual appeal — it was merely a form of mental gymnastics. It was going through the form of reasoning without the appeal or motivation which a practical problem has.

The elementary book gives a fair amount of drill on the first elements of problem solving — carefully observing the details of a situation. Both books give emphasis to the calling up of facts which bear on a given situation and also to noting likenesses, differences and other relationships between situations. These are phases of the reasoning process, essential in themselves, but always subsidiary to the whole practical problem.

Personal problems. — Such a phase of personal conduct as thrift is easily amenable to problem solving because the material is concrete, countable, and may be put down in black and white. Hence we find that the topic of reasoning concerning thrift is well organized, usually taking its place as a subtopic of arithmetic. Problems of budget making, keeping accounts, deciding as to investments, expenditures, in short, all questions of economy are well organized. More emphasis should be placed on motivating budget making and account keeping, but not at the expense of the techniques themselves. On the other hand, reasoning about other phases of personal conduct has up to the present time received very little attention or organization. Probably no subject matter in the school curriculum which provides opportunity for problem solving is more important for the average individual than is personal conduct.

In this particular Parker in his *Methods of Teaching in High Schools* says: "It is in connection with such problems that most high-school students will do most of their reflective thinking after graduation." He gives samples of such problems.

Problems of making a living. For example: What are my capacities? — that is, for what am I fitted by nature? What are the opportunities in various vocations? What are my opportunities to secure training and how can I best take advantage of them? How shall I secure a position? What attitude shall I assume toward my work? How keep on improving myself? How keep in touch with advances in my vocation? How devise improved methods of manufacturing, transporting, selling, recording, etc.?

Recreational problems. For example: Have I time to read for pleasure? Shall I read what I like or read for "high brow" motives? How much shall I go to the theatre? Shall I go to be amused or to be improved? Shall I keep up my music? Shall I play golf? What clubs shall I belong to? Shall I play bridge or poker? Shall I gamble? How shall I spend my vacation?[1]

Such problems are of paramount importance partly because the problems of choice in personal conduct are so numerous and insistent and partly because so little of personal conduct is really reduced either actually or in theory to set rules or habits. The pity, then, is that such problems are not organized well enough to become the basis for school instruction. The main fault lies in the lack of major premises — the lack of a stock of valid general facts, laws, and principles on which an individual can base his decisions. And this is due to the complex nature of society and the large number of unmeasurable variables which usually determine the results of any line of action. This does not deny, however, the value in a thoughtful consideration of the outcomes of behavior even though these outcomes cannot be scientifically demonstrated.

In youth, when the organic drives are blossoming out and causing the motive forces to be most intense, there is a demand for immediate action. Then it is most difficult to get a youth to sit and reason concerning his problems. He must take his fling at various follies and excesses — anything for immediate and vigorous action — before he finds that these are not bringing the satisfactions expected. Perhaps this is why school courses on problems of conduct conducted on the discussion basis so often fail. Youth is not ready to plan his behavior — he wants to act. Can the reader imagine the average young man contemplating whether or not to play bridge or poker? Moral instruction at this age should be less in the form of moralizing and more a thinking out of ways and means of helping youth get what it wants. It is not what youth wants that hurts so much as the means taken to get it.

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[1] Parker, S. C.: *Methods of Teaching in High Schools,* p. 178. Ginn and Company, 1915.

Social problems. — Just because it is difficult if not impossible to list desirable social habits and also to plan for their formation in the young, the place of reasoning assumes greater importance. The manifold factors that enter into every social situation and the numerous contingent outcomes that may result in the give and take between persons means that habit cannot satisfactorily care for all the possibilities of action. Not only our attitudes but our solutions of social problems are conditioned by our biases and prejudices; and this in two ways. First, bias and prejudice prevent us from facing the issue squarely. On our journey over the course which leads to a decision as to what ought to be done, we are handicapped at the start by not being able to face the question squarely.

The first task that education in reasoning in social situations has is to teach individuals to see the problems. Many public-spirited men are grappling with the problem of Americanization. Many are asking what is possible and what should be the methods. Experiments are being tried, knowledge is sought for, and the problem is squarely faced. It is somewhat disconcerting, therefore, to be told that there is no problem, that the foreigner cannot be Americanized, and that the only method is to prevent him from attaining citizenship and to exclude others from entering. Educators today are hopeful of the possibilities in education to remove the prejudiced approach to social problems. The course in "Social Problems" recommended for the senior year in high school strives to awaken the growing mind to a full realization of certain social problems. More recently a movement led by H. O. Rugg has been under way to carry this same material lower in the school course and make it available for more children.

The second task of education is to teach the possible consequences of various forms of social conduct. Here the possibilities are less hopeful. For this ability demands wide and intense experience. It means a knowledge of history and of the lessons that may be learned from the social experiments of the past. It also means an intensive study of the causes and effects of present-day conditions. What are the causes of child labor? looks back to the antecedents. What are the results of the ten-hour day or of prohibition? looks forward to the consequences. To search and find such experience and knowledge is laborious and halting; to read and discuss it in a predigested form is to run the risk of not assimilating it. This, the crux of reasoning on social problems, does not differ from reasoning in any other field — it means wide and intense experience. To reason accurately in physics — or psychology — one needs, among other things, long and abundant experience. Otherwise we fall back on pot-shot deductions or accept the second-hand inferences of others.

Much conduct that ought to depend upon reasoning, cannot do so. Sex conduct is notoriously impulsive and unreasoning. This, of course, must always be the case because of the extreme urgency of the sex drive, but society has aggravated the situation by making taboo in cultured circles the vocabulary of sexual life. The vocabulary of the sexual organs and sexual processes has been confined to scientific treatises in biology, physiology, and the like. It is hard to be dogmatic about this matter. Undoubtedly society is wise in its censure. If one goes to a public library and looks under any sexual topic in the card catalogue or in the encyclopedia, one will find the cards worn and dirty and the pages dog-eared from much use. Just as there is a constant repression of pornographic literature by the prudish, so there is a constant and virulent demand for such literature and drama. Here is evidence of an overwhelming belief in ideo-motor action. "Prevent evil thoughts and you prevent evil acts" seems to be the hypothesis. Such a hypothesis is hard to test. The writer's own opinion is that for a demand that is so insistent as is the sexual, very little influence results from a frank and open discussion of things sexual. Courses for mothers, nurses, and physicians are possible in our large universities without in any way increasing the breaking of social traditions of those taking these courses. By suppressing entirely the vocabulary of sexual life, we are preventing any vestige of reason about sexual conduct. Most people marry and are as ignorant as animals about the social consequences of their conduct. Until this taboo against the verbalization of sexual matters is broken we must expect sexual conduct to remain on a conventional or libertine stage.

Moral problems. — As to the place of reasoning in moral conduct much has been written. A recent experiment by G. A. Johnston sheds some light on the reasoning used in solving moral problems.[1] Johnston gave a questionnaire to 329 students, men and women, attending Glasgow Training College. In this questionnaire the students were asked to give their judgment on a moral issue in the form of an incident, this judgment to be rendered within half a minute after reading the problem. Then they were to have ten minutes in which to deliberate on the problem and to state the reasons for their judgment. If they changed their minds or their original answer they were to indicate the change that they made. The results showed that judgment was by no means uniform:

> It is startling to find that this large body of students is almost equally divided on the question what is the right thing to do in circumstances in which they might conceivably be placed. The students were asked to give reasons for their judgments, but, in doing this, very few of them made reference to anything that could be called a moral principle. A good many seemed to be at the level of proverbial morality, and in support of their judgments they frequently quoted proverbs such as "the end justifies the

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[1] Johnston, G. A.: "An Experimental Investigation of the Psychology of Moral Judgment," *British Journal of Psychology, General Section*, XV, 1925.

means," or "all's well that ends well." There has indeed been too much insistence in our moral discussions of generalizations, virtues, principles and ideals. Some draw attention to the conflict between moral principles. Other students asserted the existence of definite classes of actions which are exceptions to the general rule which forbids them. On the whole it may be said the students made only a limited use of anything that might be called a moral principle.

Some 16 per cent changed their opinion after deliberation, showing that reason to a degree influenced their final decision.

As with health not too much should be expected in the way of reasoning about moral issues. The situations are too complicated and the outcomes too indefinite to yield more than a superficial handling.

Summary. — Reasoning is man's valuable device for utilizing previous experience in situations where habit breaks down. Reasoning depends first of all on the power of symbolization. In man, words are a form of reaction by means of which all experience may be succinctly symbolized. A second factor in effective reasoning is response to subtle factors in the environment. A third factor is ability to recall fruitful and pertinent associations from past experience. A fourth factor is the organization of these experiences. A fifth factor is the selection of pertinent associations. Intelligence appears in all five factors of the reasoning process. Reasoning does not necessarily lead to conduct. Ideo-motor bonds are necessary before reasoning will result in conduct. Reason will only result in conduct when in the service of purpose. Certain rules apply to education: (1) verbalize activity; (2) teach abundant concepts; (3) teach general principles; (4) practise in the specific field in which reasoning is done. Much of the reasoning necessary to determine valid conduct is so difficult that perhaps it is most important to teach the best available solutions to a few of the persistent recurring problems. The greatest service that reason can offer in the guidance of conduct is in planning and executing.

CHAPTER VIII

GENERAL CONDUCT — CONFACTS

Importance of confacts — Concepts *vs.* confacts — Stimuli for confacts — Confacts *vs.* ideals — Confacts *vs.* traits — Formation of confacts — Trial and error — Directing the attention — Varying concomitants — Contrast — Laws of ideo-motor activity apply in conceptually stimulated confacts — Imperfect confacts — Peripherally *vs.* ideationally conditioned confacts — Summary.

At the end of Chapter III it was stated that one important feature of conduct is that it involves responses not only to gross features of the situation, but also to its subtle and imponderable features or aspects. Indeed, so subtle and refined may these aspects become, that it seems as though almost any feature or phase of our material surrounding to which we are sensitive might become a guide to conduct. Naturally there is more opportunity as well as necessity for us to make some stimuli our guides rather than others, because they are more effective or more convenient or help us better to satisfy our impulses. Our response to expressions on the human face may be to exceedingly subtle changes or sets of expression. Indeed, in such respects, our capabilities of response have so far outstripped our powers of analysis that it has not been possible to define or analyze slight differences in facial expression closely enough to be able to describe response to human expression. Although the crude attempts of psychologists to analyze facial expression by dividing the face into segments, defining characteristic expressions of these segments, and then recombining such fragments into a complete face in all possible combinations are commendable, the subtle changes which determine our responses are still unanalyzed.

This characteristic of response to minute elements is also clearly illustrated in reading. The actual differences between letters in many cases are extremely slight: c and o, c and e, and i and j as printed differ only in very slight particulars, yet with practice we become extremely sensitive to these differences and readily detect them both when the letters appear singly and when they go to make up the integral form of words. The word ocean is immediately detected as wrong if printed ooean or occan. We are accustomed to the form ocean and any deviation, however slight, is immediately detected.

In every response some feature of the situation is singled out to be the cue to activity. Response is never to the gross, undifferentiated situation as a whole. The degree of subtlety differs so that there is no sharp dividing line between those responses which are the excessively obvious and apparent factors in the situation, and *confacts*, which are excessively subtle and imponderable factors in the situation. The child who has an orange to eat at home responds particularly to its skin, its sections, its taste, etc. The child who passes a fruit stand and wants an orange responds to the ownership of the orange, a much more subtle quality. The former child, having everything he wants, may never have learned to respond to ownership.

Importance of confacts. — The sort of behavior which is characterized by response to very subtle factors in the environment assumes tremendous importance in conduct. The conduct which is most vital to society is not that regarding the manner of handling implements or addressing acquaintances but that concerning the regularity or uniformity of our responses, and the way in which we react in situations bearing certain characteristics. Honesty, trustworthiness, and truthfulness are examples of the first sort; courage, friendliness, and good sportsmanship are examples of the second sort. A response which is guided by such subtle features of the situation has been called a "confact." A "confact," which is not pure chance but is a habit, implies a consistent type of response wherever the elements in question occur.

Concepts *vs.* confacts. — A confact may be compared and contrasted with a concept. They are alike in that they are both responses to subtle factors in the situation. There are certain words which are definite and limited in their denotation. Proper names refer to specific objects or persons with no attempt at analysis. For the little child, *dog*, *coat*, and *sugar* refer to particular dogs, coats, and lumps of sugar. But as experience widens, specific verbal responses grow into concepts. Various dogs are seen — big and little, long-haired and short-haired. Other animals are seen, and dog characteristics become differentiated so that finally *dog* refers not to any specific animal but becomes a term referring to the class of animals designated by the name. Not all concepts are thus easily sensorially represented. Geometry in part owes its value to the fact that it is a field where reasoning may be easily learned because its concepts may be acquired by definite visual reference. But in civics such concepts as radicalism, socialism, and republicanism have no such clear-cut reference. The process by which these latter concepts are learned must be one of much more extended analysis, comparison, and contrast on the part of the child. In this sense, confacts and concepts are alike — they depend on a process of analysis and discrimination. They both are responses to a single element which may be common to a number of otherwise varying situations. But they differ in their responses. A concept is a mental or verbal response whereas a confact is a conduct response. Confacts do not partake of words or ideas but may spring from them.

Stimuli for confacts. — Confacts may be classified into two general groups: (1) those which are conditioned by peripheral stimuli and (2) those which are conditioned by verbal stimuli or concepts. The former are by far the more frequent and also the more elusive of definition and classification. It will require intensive and skillful analysis to list the confacts which are conditioned by peripheral stimuli. However, they must be so catalogued if they are worth forming and are to be made an integral part of education. One cannot educate until it is known definitely toward what end one is trying to educate.

Concepts may serve as stimuli for confacts. Whatever they may be physiologically, concepts have acquired their meaning from the outside world and serve as representatives of their counterparts. Under proper conditions, therefore, concepts may become stimuli for confacts. Education today assumes that *all* worthwhile confacts are conditioned by concepts. Modern education holds that a clear concept of trustworthiness is necessary before the confact can be formed. Indeed much of what is supposed to be formation of conduct stops with the formation of concepts, on the tacit assumption that once a concept is formed it will of itself carry over into action. Of course, as we have already seen, no such assumption can be made. Yet we have manuals urging the importance of neatness, promptness, accuracy and the like, with the assurance underlying them that reading of the importance of these matters is sufficient to form them. Thousands of Sunday sermons are preached with the warm conviction that they will make a difference in conduct on the other six days of the week. While it is denied that all confacts are conditioned by concepts, the possibility of such conditioning is admitted.

Confacts *vs.* ideals. — Confacts and ideals are not synonymous. Confacts *may* be conditioned by peripheral stimuli whereas ideals are *always* conditioned by ideas or concepts. Ideals also refer not alone to the *form of conduct* but also to its emotional setting or background. Voelker defines an ideal as "a generalized notion or general concept used as a plan or standard of action, the recognition and appreciation of the practical worth of this plan or standard, and a tendency (habit) to accept and obey the plan or standard and to act it out in conduct."[1] A confact is an act conditioned by its stimulus. It is hence much more definite and concrete than Voelker's ideal. In Voelker's ideal the concept is a plan or standard of action, while in the confact it may be the stimulus to action. A confact makes no reference to "the recognition and appreciation of the practical worth of the plan or standard." A confact is the act, while Voelker's ideal is a *tendency* to accept and obey the plan or standard and to act it out in conduct. Bagley defines an ideal as a master idea or control which determines large patterns of conduct. "It is surcharged not only with *meaning* but with *worth;* it reflects something that appeals to one as of outstanding value; it has an emotional, as well as an intellectual basis, it is appreciated as well as understood and comprehended."[1] Whereas Bagley's ideal is an *emotionalized concept*, a confact is merely a unit of conduct conditioned by a concept. Indeed, the "ideal" may run to emotion — that is, the ideo-visceral bond may become so strong and overbearing that the ideo-motor bond becomes lost. On the other hand, the emotional feature of an ideal may be dispensed with, with no apparent loss to conduct. The only known function of an emotion from the physiological point of view is that of reinforcing an activity; but it does not define activity. The reinforcing character of emotion apparently has the effect at times of summation, thereby destroying the balance of positive and inhibitory readinesses with the result that activity may be redirected. But this influence of emotion is notoriously transient, and after the emotional excitement wears away conduct is apt to settle back to its routine or habitual phase.

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[1] VOELKER, P. F.: *Functions of Ideals and Attitudes in Social Education*, p. 47. Teachers College Contributions to Education, No. 112, 1921.

Charters defines *ideal* as "a trait which has become the object of desire."[2] He refers to virtue, swift-footedness, piety, and social efficiency as ideals; yet in another place he mentions ideals as divorced from activity. Enough has been said to indicate that by a confact we have in mind the behavioristic element of conduct which derives its cue from a generalization which may or may not be a concept.

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[1] Bagley, W. C. and Keith, J. A. H.: *An Introduction to Teaching*, p. 241. The Macmillan Company, 1924.

[2] Charters, W. W.: *The Teaching of Ideals*. The Macmillan Company, 1927.

Confacts *vs.* traits. — Traits and confacts are often called by the same name. A distinction between them must be made. Honesty, prudence, and foresight are called traits as well as confacts. Traits are used frequently by Charters in his writings. A trait is a static thing. Once a person has established a confact — that is, a consistent line of generalized activity, such as honesty — this species of conduct becomes objectified. The person is called honest. And when a person is called *honest*, one expects that this trait will exhibit itself in all his acts. A trait is first cousin to a mental faculty. A trait occupies the same position with reference to a mental faculty that a confact does to a concept. Traits, residing in a person, become dynamic and powerful according to this theory. A cruel person is one who is activated by cruel impulses, or who has cruel traits. This solidification of confacts into traits is seen in the attempts at trait or character rating. How much thoroughness has a man? is like asking, how much imagination has he? The fallacy is that we never should have left the stimulus-response unit. It is a play of the imagination to objectify this species of acts in man and to attribute them to traits, as if these traits were dynamic forces. One does not seek to build traits in a man — one seeks to build confacts which are uniform responses to general stimuli. Charters has recently spoken of *trait actions* which are specific situations in which traits exhibit themselves.[1] According to Charters, one first sets up an ideal which, when it becomes habitual in action, becomes a trait — something objective that helps to define the personality and to prescribe action. His trait actions are merely the situations in which a perfected trait will exhibit itself. This species of nominalism, which we mentioned in our opening chapter is most unfortunate. It attributes a false reality to what is not really independent but has only a dependent existence. Such nominalism is avoided by sticking to behavioristic concepts. A confact makes no assumption other than that it is a response conditioned by a very subtle aspect of the outside environment, or its representative in the form of a concept.

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[1] CHARTERS, W. W.: *The Teaching of Ideals*, p. 36. The Macmillan Company, 1927.

Formation of confacts. — Let us first confine our discussion to confacts conditioned by peripheral stimuli and omit for the present the matter of motivation. We will assume that there is some motive or drive for the formation of the confact — an assumption which is very necessary, and one whose implications will receive treatment subsequently.

Trial and error. — In the first place, confacts may be formed by pure trial and error. Probably when the truth is finally known, we shall be astounded at the large number of confacts which are formed, unconsciously to ourselves, in the rub and wear of everyday life. Confacts are thus formed in animals. The mice which were taught to respond to colored lights were on the first rudimentary road toward responding to an element in the situation. One doubts if such behavior should be called a confact as there is no evidence that a connection had been built up between *red*, wherever found and however stimulated, and the response of going toward their food. Kohler tells in his lectures of an experiment with university students in teaching them to discriminate between two boxes of exactly the same size, shape, color, weight, material, etc., and differing only in the fact that one or the other had thrown on it a very slight shadow caused by the experimenter standing between one of the boxes and the window. More than a hundred trials were necessary before the differentiating factor become a prepotent stimulus. So tea or wine tasters learn through long experience to make fine discriminations. We may conclude that confacts may be formed by trial and error providing there is some sort of social approval and disapproval which will act as guide or teacher. But this is a very expensive, tedious, and uncertain method.

Directing the attention. — A remarkable shortening of the process may be accomplished by directing the attention. In Kohler's experiment the simple word "shadow" would have been a sufficient cue to give success immediately. When we miss our train our attention is called forcibly to the necessity of promptness. The little child whose mother says "Such dirty hands! Aren't you ashamed?" or better, "Such clean hands! How proud I am of you!" is having his attention called to this point. The results are obviously more speedy than if the mother were to whip the child every time his hands were dirty or give him candy every time his hands were clean without telling the reason. This is so obvious as to be taken for granted and hence is usually overlooked.

Varying concomitants.— A third method for forming a confact is to vary the situation containing the element in question. Kohler could also have cut down on the learning time by exhibiting many pairs of objects, all differing in this slight matter of shadow. So the mother who wishes to teach cleanliness to her son will do more than refer to his hands. Hands, face, shoes, clothing, rug, books — the specific cleanliness response will be taught with reference to all. By dint of patience the response will not be to the objects themselves but to that particular feature of them, — the clean-dirty feature — and when this time comes the desired response will be made wherever the clean-dirty feature of the situation is recognized. It should be noted here that there is no question as to ideals — the act is a simple response to the element in question wherever it occurs and is recognized.

Contrast. — A fourth method is by use of contrast, or rather more generally, by varying the element in question. In Kohler's experiment he might have shown boxes differing greatly in light and shade, and this would have immediately furnished the clue, so that the attention would be directed to and discrimination made of even very slight differences. Again in our cleanliness example, showing one clean hand beside one dirty hand with the proper satisfaction and annoyance conditioners would facilitate learning the habit of cleanliness.

Most desirable is the combination of all these methods — attention should be directed, by language or otherwise, to the element to which the response is desired; the element should be shown with varying concomitants; and contrast should be used in showing situations with the element present and absent, or in larger or smaller amounts. These methods are those commonly used in the formation of concepts — they also apply to the formation of confacts with equal validity.

Laws of ideo-motor activity apply in conceptually stimulated confacts. — In forming confacts which employ concepts as their stimuli, the laws governing the formation of ideo-motor activity apply. These principles may be briefly summarized here.

First one must have a clear concept corresponding to the element in question. If it is a question of a confact to the idea of honesty, then the concept of honesty must be clearly defined. One must know the essential nature of honesty and must recognize honesty in all situations where it is a feature. If the confact is one of neatness, then one must know the essential nature of neatness and must recognize all situations where neatness is a factor. This kind of confact very closely approximates an ideal, except that in the case of the confact we are concerned only with the connection with the concept and its subsequent act, whereas an ideal usually refers not to the act but to the "tendency" to act and to the "feeling of value" accompanying the idea.

Second, one does not learn the particular response necessary in a confact conditioned by an idea as an act of applying the idea. That is, the concept does not originally condition the act. We must have learned to act in this same way at some previous time before the act can be conditioned by the idea. In the case of honesty, for instance, before honesty is conditioned by the idea of honesty, we must have already learned to keep our hands off, to inhibit taking things that we want, to play without cheating, to pay full value for what we receive, etc. This does not mean that we have learned first the confact to peripheral stimuli, but that we have learned in each specific case the motor skills, inhibitions, or whatever they may be, that are used in the ideationally conditioned confact. Before a child can be taught cleanliness, he must have learned how to wash and dry his hands, how to step over or around mud puddles, and how to use a clothes brush. A person with the best intentions in the world may start the day intending to be friendly. But his intentions will fail at the start if he has never learned to think the same thoughts as his neighbors and to take an interest in his neighbor's hopes, successes, and failures, or if he has not learned the physical mechanisms of a cheery voice, a cheerful countenance, or a hearty handclasp. The man who shakes hands with lowered eyes, or glances to the left or right as if trying to escape, is a man for whom the most friendly intentions in the world will be of no avail because of certain conflicting habits.

Third, unless the idea and its act or inhibition have been associated in the course of experience, the bond does not function. There is no miraculous connection. Positive acts that we must learn, such as courtesy, do not function by a sheer act of will. We must learn the elements singly, and each of these must be associated with the idea of courtesy in the act. The child from an uncultured home reads or learns in school about courtesy, apprehends its value, and *resolves* to be courteous. The friendly genii do not come thus easily. It takes more than willingness to be courteous. Many separate habits and skills must be learned. If a name has been attached to each act, they may all be associated with courtesy, and through verbal association the word *courtesy* may stand for the names of all the separate acts. Then without distinct practice a single word such as courtesy may be a touchstone which gathers under its wing many separate habits, and acts as their cue.

There is one instance where this previous association between word and act seems almost unnecessary. In the case of the inhibitions no previous practice seems essential. The word "don't" or "I must not" seems early to acquire its own generalized inhibitory response which cuts across many situations. In this way the "I must not" action becomes a confact. The withdrawing reaction is instinctive or early learned and soon becomes associated with a host of situations. When speech is born such words as "don't" become conditions for this response. It seems probable that ethical instruction may accomplish much on the negative side for those who have learned the elementary responses to "don't" or "I must not." Once the instructor can transfer a peripheral "don't" to an internal "I must not" any negative behavior can be taught. It is true that the positive "do" or "I must" can also serve as a cue for action but in this case all depends on the skills or habits themselves.

Imperfect confacts. — Why are confacts imperfect? Why are we not always honest, or coöperative, or just in all situations? There are two main reasons for the imperfect formation of a confact. An imperfect confact may be due to failure to have experience with all concomitants of the element in question. The meaning of honesty, for instance, has grown tremendously more complex since the growth of our modern industrial civilization. In filling out an income-tax blank there are usually several items about which one is in doubt or whose meaning is not clear. In such cases it is easy to err on the side of failure to enter all income, which when the tax is paid, becomes a dishonest act — not dishonest in the sense that there was intentional dishonesty, but dishonest in the sense that all that is due is not paid. There are numerous possibilities today for stretching the meaning of obligations, for hiding some of the facts. Particularly is this true in corporation acts, for which, after all, some individual is responsible. We may state the same fact in the case of ideationally conditioned confacts by saying that they depend on imperfectly formed concepts. Where the confact "honest" is conditioned by a definitely fostered concept of "honesty," the confact may be partial because the concept is partial. When concepts are not freed from concomitants, it certainly is not probable that perfect confacts will be formed. The lady who knew it was wrong to cheat, but did not know that a lead of trumps in cards called for a follow in the same suit unless one is all out of that suit, is an example of the case in question. From an ethical standpoint one might question this as an example of cheating. But here we are not considering the ethical question of intention — we are merely considering the completeness of the confact. Naturally, as in the above example, most confacts will be in some degree imperfect, insofar as they depend on knowledge. What may be courteous behavior in one locality or age may be discourteous in another because of differences in standards.

The other reason for imperfect confacts is the prepotency of other stimuli. These stimuli are partly peripheral and partly internal. In the case of peripheral stimuli, rooted habits often override less well-established forms of conduct. The man who makes a New Year s resolution finds that his resolution has to combat habitual activity every day. Sooner or later the resolve, when the attention is relaxed, is overcome by established habit. A confact may also suffer from interior drive or purpose. The storekeeper may have had the confact of accuracy built up in childhood so that he is prompt to appointments, is accurate in measurements, and is punctilious in making change. But the temptation may come in his work to short change or underweigh. An interior motive or purpose which is insistent may override established habit or prevent the formation of habit. A confact, then, is a habit, and depends on repetition and satisfaction for its formation. Good intention will not form a confact, if contrary habits interfere. It will die out like a tender plant choked with weeds. Neither can a confact endure against an adverse purpose or motive, or survive exercise which does not give satisfaction or fill a need.

Peripherally *vs.* ideationally conditioned confacts. — What are the relative advantages of confacts peripherally and ideationally conditioned? The case is much the same as with ideo-motor action in general. A concept is extremely helpful in the formation of a confact. It cuts short much random and useless trial-and-error activity. It focuses attention on the specific acts to be performed and on the specific element in the situation to which the act will be performed, thereby making more consistent the performance. It helps a person to recognize the element wherever it occurs toward which response is to be made. For these reasons clear concepts are most helpful in the formation of confacts. Education may well set itself the definite task of giving clear, accurate, and complete concepts of generalized conduct, and while such concepts do not lead of themselves to the desired conduct, they are almost essential factors in such conduct.

But, as has been intimated above, confacts will not persist if they remain on the ideo-motor level. Unless they become automatic, unconscious habits which can resist competing stimuli, confacts partly formed are always in danger of destruction. It is here, the writer believes, that our modern educational theory has gone far astray. The aim of education is not the formation of ideals. Conduct is on a precarious basis when ideas are forever to be relied on as guides of conduct. Ideals are merely stepping-stones in the educational process. They are propædeutic forms of activity which will be dispensed with when conduct becomes habitual, that is, dependent on peripheral stimuli. Straight thinking is necessary here. Voelker has demonstrated experimentally that ideals are effective in promoting trustworthiness. The conclusion is easy to draw that ideals are very important aims of education. But the conclusion does not necessarily follow. What is effective as an aid in the formation of confacts is only a tool. It loses its efficacy once it has initiated and propelled activity a short distance. Soon the ideal gives over its charge to habit and disappears, and, if habit is not formed, it disappears anyway unless it is constantly reinforced.

No thinker on the problems of character formation seems satisfied with conduct which is habitual — with merely doing the right or best thing in the right place. Conduct on the basis of habit is external, driven mechanically from conditions without. True character, we are told, must be more or less impervious to conditions from without. It must be determined by purposes within the individual himself. This is confusion, psychologically; and impotence, educationally. When psychology is driven to vague descriptions of "internal" conditions, education is reduced to vague exhortation, platitudes, and sentimentalism. This describes the present situation of education as regards character formation.

The issue is not between habits and ideals. The issue is between habit and reason. There do arise situations when habit is insufficient. Changing conditions often make habit unsatisfactory. Then reason must come to the rescue. If the reason is not competent, or if it has not been trained to meet the specific situation, then character breaks down. But where reason is competent we may expect crises due to changed circumstances to be met satisfactorily.

Summary. — A confact is a conduct response to subtle elements in aspects of the environment. Confacts are important because they are prized so highly by society. Concepts and confacts are alike in that both are responses to subtle factors in the situation. Concepts are verbal responses whereas confacts are conduct responses. Confacts may be conditioned either by peripheral or verbal stimuli. *Confact* is not synonymous with *ideal* or *trait*. Confacts refer only to the conduct response, whereas *ideals* also imply an emotional setting or background. *Confacts* refer to reactions, whereas *traits* are usually thought of as static, solidified characteristics and in this sense may be likened to the faculties of a past psychology. Confacts are formed exactly as any generalized activity is formed of which the following are types: (1) trial and error, (2) directing the attention, (3) varying concomitants, (4) contrasts, (5) a combination of these methods. Where the stimulus to a confact is verbal the laws of ideo-motor activity apply. Inhibitions conditioned by "don't" or "I must not" seem so general as to be an exception to the general law that a skill or action must be independently formed before ideo-motor action can be possible.

CHAPTER IX

SOME IMPORTANT CONFACTS

Truthfulness — Courage — Loyalty — Cleanliness — Frugality — Generosity — Kindliness — Obedience — Generalizations concerning confacts — Summary.

The discussion in the previous chapter may be clarified if certain important confacts are analyzed. The confacts chosen are important as evidenced by the fact that they occur in several of the conduct codes mentioned in Chapter IV. A systematic inventory and evaluation of confacts is much needed. Certain of them are so much a matter of our heritage that there is little fear of their being overlooked. At the same time, moral education, which is the guardian of the confacts, has placed in the past so much emphasis on *how* to form character that just *what good character is* has been relatively neglected. The stand taken in this book is that more than half the battle of conduct training is won if one knows more definitely what conduct is and what conduct is considered desirable. The parent or teacher who knows in advance what he is trying to do in the way of conduct training will not have to wait until a crisis is reached before sensing the problem.

Truthfulness. — As a confact, truthfulness may be defined as *the communicating to or influencing of other people so as to accord with one's own observation or interpretation of a situation.* Truthfulness is the opposite of deceitfulness, which is to communicate something not in accord with one's observation or interpretation of a situation.

Two distinctions are necessary. Truthfulness as above defined is not exactly synonymous with telling the facts of a situation. We should all be liars if our statements had always to accord with the facts. What is necessary is that what we say agree with what we have observed, or what we believe. Our observations are not always accurate, nor our interpretations always correct, but for the normal person observations and facts agree tolerably well. The psychology of testimony has emphasized that testimony may diverge sharply from the facts, but striking errors of observation or judgment should not be permitted to influence one to believe that observation or judgment on the whole is grossly untrustworthy. But whether or not testimony is generally untrustworthy is beside the point. Consistency between observation or judgment and report is something that can be expected, whereas to demand the report of the actual facts is often to demand the impossible.

The other distinction is that as the definition stands, it refers only to the act of communicating or influencing and not to the inner disposition of the person who does the reporting. Oftentimes the essence of truthfulness is made the desire or intention to speak the truth and the essence of deceitfulness the intention to deceive. Behavioristically the intention is disregarded in describing the confact. To be sure some situations stimulate falsehood more powerfully than others, and in such cases the intention becomes more apparent. Telling the truth in spite of apprehended punishment or telling a lie to avoid punishment is a case where the situation forces strong intentions, but the intention is not the essence of the act, but rather the response made to the situation.

In terms of stimulus and response, *truthfulness* may be defined as follows:

Situation: Someone to communicate to and something to communicate.

Response: To communicate or give the impression in accord with one's observations or interpretation.

Other factors in the situation may be present to make truth telling easy or difficult.

The essence of truthfulness is the "in accord" or *matching* of report and observation or interpretation.

In small children truthfulness is built up as a habit as soon as they begin to talk. As often as a child reports experiences correctly and finds satisfaction in so doing the habit is being strengthened. Truth-telling is not innate, and there is no guarantee that a small child will tell the truth. Indeed one should expect that a child will not tell the truth on some occasions until the habit of truth-telling is stamped in. The first occasion on which a mother usually notices this factor is when the child tells a falsehood in order to avoid punishment or censure. Little children will easily deny that they have broken or torn something, or have taken food or a toy that does not belong to them. In reality these noticed occasions may be best considered as *tests* of habits already formed.

Many children find it difficult to distinguish between actual observed experience and the experience which is the product of their own thoughts. Many children's lies may be ascribed to an overactive imagination. Definite practice should be given to children in distinguishing between the report of peripheral observation and the report of the constructive imagination. Except for bright children, who readily make distinctions, one need not expect distinctions between fact and fiction to be made without much practice.

The confact may be hastened by the use of language. Little children soon and easily learn that *a lie* is condemned and that truth-telling is admired and praised when done under difficult circumstances. This verbalizing of the confact and the defining of it help to consolidate the habits previously acquired.

Truthfulness may be partial or incomplete as a confact in two ways. First, one may tell the truth more readily to some persons than to others. G. Stanley Hall found that children would lie to their teachers whereas they would not lie to their mothers. This is an example of the habit fixing itself to its original stimulus.

Naturally one wishes truthfulness to be a habit irrespective of persons. In the second place, one may tell the truth about some things and not about others. Children may be taught to admit faults or accidents where they would conceal masturbation. Here again, one wishes truthfulness to act irrespective of the nature of the thing to be communicated. There may be situations where one's judgment may step in to sanction a lie, as in the case of a lie to save a man's life, but these are exceptions which do not come under our general rule because they do not represent habitual activity.

Courage. — Courage means to do the difficult; that is, to act in a manner contrary to strong stimulation such as fear, social pressure, and the like.

Situation: One involving danger, social pressure, or any other feature having strong impulsive qualities, or tending to vigorous action.

Response: Resistance to the prepotent response to the situation. This resistance consists of another reaction which for the person is a more ready response than the one normally to be expected in the situation. This opposing response is often to an idea or some abstraction.

In children courage exhibits itself largely in acting in spite of fear or pain. Not only children but adults fear to approach a vicious dog, so that approaching a house guarded by a barking dog may be taken as typical of an act of courage. Another type of courage shown by young children is the bearing of physical pain or anticipated pain. It takes courage to go to the doctor's to be vaccinated, or to have a tooth filled, or even to have a surgeon's plaster taken off or to have a haircut. It also takes courage to do things alone — to go to school alone for the first time, to stand and speak alone on a platform to a group. It takes courage to stay at home alone in the dark, or to go into strange places in the dark. In each case there is a resistance to the controlling element in a difficult situation. And this resistance is a positive thing — it is a substitution of one response for another.

The soldier on the battlefield faces difficulty in two directions. In front he faces physical danger, but in the rear he faces the social disapproval that he would incur were he to act "cowardly." We impute great courage to the soldier for he risks life itself. But the soldier may be as cowardly as brave for he is running away from the taunts of cowardice as well as into the fire and sword. And in some cases it may be possible that the physical danger is the lesser of the two fears. Much that passes for courage may be the running away from the greater fear. Indeed one may only judge what is most feared by noting what is most avoided.

Courage is built only by being practised. How many parents or teachers even consider giving courage practice? It is a ticklish thing to do — playing with fears. There is always the chance that fears may be increased as well as overcome or submerged by being stimulated. Courage must be practised by opposing weak fears that have good opportunity of being overcome by strong social pressure. Here again verbalization helps greatly. If courage or bravery is much held up as being desired and if cowardice is despised and ridiculed, then these may become generalizations strong enough to set over against many another difficulty or fear. Courage is not a much-talked-of confact today. The necessity of physical courage has largely disappeared. Society is not yet sure that it wishes the sort of courage which means nonconformity. This opposition to social approval or disapproval is a higher stage of courage, which comes usually only after the generalization has proceeded far enough so that the very force originally most powerful in forming courage is opposed.

One of the best descriptions of cowardice is contained in Conrad's *Lord Jim*. In this book Conrad tells the story of a man who follows the sea and is suddenly placed in a position of great danger. He is an under officer on a crowded ship carrying a load of religious pilgrims in the Red Sea. While he is on watch the boat strikes some unknown object in the dark with such force that a gaping hole is torn in the ship's side, and sinking is inevitable. In this emergency, which Conrad depicts with great vividness, the man yields to his terror and gets into a life boat before any of the passengers, when his obvious duty is to remain on board the ship. The story not only depicts the act but the curse which the society of the sea forever after places upon him by branding him as a person who would fail in an emergency. The *test of courage* is the suddenness of the difficult or terrifying situation where one's inner resources either immediately function or the resistance is not made. Courage is not built in these imperious situations, however, but rather in the course of everyday activity where there is plenty of opportunity to marshal the opposing forces.

Loyalty. — Loyalty may be defined as responding consistently and positively in favor of some person, institution, or confact.

Situation: Some person, institution, confact which may make various conduct demands.

Response: Consistency in conduct in favor of the person, institution, or confact, even if the demand be one of sacrifice or danger.

The essence of loyalty may be found in the words *consistency* and *in favor of*. Loyalty means first of all consistency, absolute devotion, no trace of betrayal. Loyalty also involves making every act, word, or thought that concerns the object of loyalty *in favor of* that object. Loyalty, therefore, is absolutely opposed at times to justice. "My country right or wrong," typifies absolute loyalty. But discrimination in national loyalty according to the circumstances intervenes to prevent perfect loyalty. The conflict of loyalties also works to prevent that blind, unanswering loyalty that knows no exception. Thus loyalty is a confact that often must yield either to outer circumstances or to inner conflict.

Loyalty shows itself comparatively late in life, probably not until adolescence. Loyalty needs for its situation a friend or institution that may be abstracted or conceptualized, and for the normal child this conceptualizing is not possible until early adolescence. But, even so, loyalty is facilitated by certain earlier habits that may be formed. A previously idealized confact, such as truthfulness, may become the object of loyalty. Children form codes of honor which, if scrupulously observed and cherished by their elders, may form the germ of later loyalty. Refusal to tattle is an example of an early formed habit in children which later may blossom into distinct loyalty. The keeping of a secret is another habit that may later be used in the loyalty confact. Little children often form strong friendships, and these bonds are the embryo habits out of which full-fledged loyalty later springs.

But loyalty as a confact only takes definite shape as adolescence is reached. Boys without adult guidance then naturally form gangs. The Boy Scout organization offers an organized mold for the boy to use as the stimulus for loyalty. Later the school with its athletic teams and its various clubs and fraternities provides adequate opportunity for loyalties to form and loyalty as a confact to grow. Such opportunities are present throughout adult life.

Royce has given us a very fine statement of the meaning and significance of loyalty. He states that loyalty requires: (1) personal leaders, (2) an idealizing of the course, and (3) great strains, labors, and sacrifices. In terms of psychology, personal leaders are a part of the situation that evokes the loyalty response. Instead of an idealizing of the course we would say a "conceptualizing of the course." This is another point where for the purposes of defining and describing the confact we throw off the emotional element which is certainly present as in ideals, but is unnecessary for the present description. The great strains, labors, and sacrifices are the factors which strengthen the bonds of loyalty, *bonds* being used in its psychological sense. That is, labor and sacrifice are factors in the learning process, but do not help define or describe any more fully the essential nature of the confact itself.

The verbalizing of loyalty is less prominent than in the case of other confacts. One does not hear constant exhortations to be loyal. Society has found other means of perfecting loyalty than by verbalizing it. Schools organize cheers, sing school songs, hold mass meetings. Secret societies require vows and pledges. Institutions employ ceremonies, rituals, and many other means to impress loyalty. Perhaps a verbalization of loyalty would be valuable as with other confacts. Royce's phrase "loyalty to loyalty" might well be taken up and more widely adapted to concentrate attention on this confact and hence make it more effective.

Loyalty may easily be partial and incomplete. One may be loyal to his fraternity and neglect the school athletics. A man may be loyal to his party but disloyal as a husband. The very fact that loyalties are so specialized is evidence that society trusts the specific stimuli connected with each situation to build loyalty and has neglected the generalization or verbalization of the confact.

Cleanliness. — Cleanliness as a confact is less obscure than the preceding confacts because the situation is so obvious. Cleanliness may be defined as the avoiding of dirt or its derivations — dirty acts, language, thoughts.

Situation: Dirt in vicinity.
Response: Avoidance.

or:

Situation: Dirt on person.
Response: Removal.

Cleanliness well illustrates the confact. In the first place cleanliness is a set of habits begun in infancy. The mother bathes the baby, provides clean clothes, a clean bed and carriage and chair. The food which is provided is clean and is served in clean dishes. Later on the child must form a habit with regard to each of these. Bit by bit there is generalization. All dust is avoided or removed wherever it may be touched. There grows the demand for clean food and clean clothing. This cleanliness may go so far as to become an obsession and take up more than a necessary share of the day's time. The further generalization which makes cleanliness include word, thought, and deed is more or less artificial. One may attempt to prohibit profanity or obscenity by calling it unclean. The analogy is somewhat far fetched. Probably if inhibited at all profanity and obscenity are inhibited on their own account and only later seem "unclean" by reason of their artificial association with uncleanliness by parents or teachers. Likewise an unclean act such as cheating or using unfair tactics, "dirty playing" in a game, is another long distance analogy. Here again one learns to avoid dirty playing because of the social pressure against that kind of sport. The dirt association comes only after the avoiding is learned. For many people, however, all these may be gathered up under the head "cleanliness," and cleanliness, verbalized, may serve as an additional stimulus to make the confact more binding.

Cleanliness may easily be partial. The writer knows a man exceedingly neat about his clothing who often has dirty hands. His mother used to say that dirt stuck to his hands, but probably the truth is that he never learned habits of cleanliness with respect to his hands. Of course there is little relationship between these other aspects of cleanliness in speech and good sportsmanship and mere personal and bodily cleanliness.

Frugality. — Frugality is sparingness in the use of food, tools, or materials and consequent restraint in their purchase.

Situation: Possession of goods.
Response: Economy of use.

also:

Situation: Possession of money.
Response: Prudence in expenditure.

The essence of frugality is sparingness in the use of things. In this sense it is at first an inhibition, but it eventually assumes a positive character, namely, an attempt to save or accumulate.

Frugality, as all confacts, originates in simple and definite habits early in childhood. Habits are early formed of clearing the plate at meals, of using only a limited amount of sugar, butter and the like, of being careful in the use of paper, of sharpening pencils with care. These are little acts, insignificant of themselves, but they form the foundation for later frugality. Habits with regard to money are particularly important in the formation of frugality. Little children who early are given money learn how valuable it is, how it must be saved if worth-while things are to be bought, and how it is to be spent wisely. In the case of children who are not early made responsible for money of their own, there is less certainty that wise habits will be formed. Logically one may define frugality perhaps more precisely in terms of use in proportion to one's needs. One may say that that person is frugal who uses no more than he can use, or who uses no more than he should use. But psychologically such fine distinctions are not recognized. Frugality is built on a basis of habit. Habits of taking one or two spoonsful of sugar for tea are built early, and the matter of use or need does not enter in. If it did enter we should have everyone who is frugal measuring the amount of sugar necessary to yield saturation of solution. Psychologically, frugality is merely a matter of more or less.

Generosity. — Liberalness in giving or sharing possessions with others may be our definition of generosity.

Situation: Another person or institution; desire or need on the part of the other person; and possession of what is needed or desired by the subject.
Response: Giving or sharing.

Generosity is well understood and there need be little elucidation as to its nature. Generosity rests on a firm foundation of habit laid early in life. Habits of sharing their food or toys with other children, animals, or grown-ups are learned early by little children. Children may also be taught in early childhood to give. The church or Sunday school provides opportunity for the more impersonal sort of giving. More recently the public schools have encouraged giving by planning Thanksgiving baskets, subscriptions to the Junior Red Cross, and the like. Giving is as easy an act to evoke in children as saving, but only too often it is starved out, and in the struggle of later life disappears.

Generosity may become a confact more surely with the aid of generalization, and verbalization helps in this. On the other hand, generosity seems to be particularly prone to specialization. One may be generous to one person and not to another. Children are inclined to be most generous to members of the family (if generosity is a part of the family *mores*); their generosity is extended less surely to other relatives, but toward all others in many cases, it may be lacking. Again one is induced to be generous to a person who begs or who shows dire need; yet a person who may be just as needy but does not ask for help or does not show the need may be overlooked. "Only children" lack many of the opportunities for building habits of generosity. Within a family of children there is apt to be much give and take and sharing, but in play with children outside the family, property rights are more apt to be respected and sharing is less practised. So the only child does not naturally build generous habits.

Again there is specialization in what is shared. Children learn to share food and toys with their brothers and sisters or playmates. They learn not to share clothing or money. So these habits of sharing which we grow up with become specialized according to family practice.

These special habits of generosity with respect to people and with respect to what is shared set the stage for the mature confact. One may generalize and verbalize generosity but there is always a certain amount of specialization depending on early habits. The early lender finds it always easy to lend, and the early borrower tends to borrow at the slightest need. Those who are accustomed to having company in their parental home find it easy to continue the custom when they set up their own home, while those who seldom have seen strangers in their parental home are apt to entertain but rarely when they set up their own homes. And where man and wife come out of homes with different generosity *mores* there is bound to be a certain amount of friction before adjustment is reached, for there must inevitably be a stretching or yielding of early habits. So verbalizing or conceptualizing generosity would seem to be somewhat ineffective in really reorganizing the basis of generosity habits originally established in childhood.

Kindness. — Kindness we may define as dealing with a person or animal so as to avoid giving pain or injury and so as to elicit feelings of pleasure.

Situation: An animal or person who is in a more or less defenceless position in some respect.

Response: Handling, speaking, or dealing so as to avoid pain or injury and so as to elicit feelings of pleasure.

Kindness is based on a set of habits formed in early childhood. Children learn habits of kindness with respect to animals. If there are pets in the home there is abundant opportunity to learn habits of consideration such as letting the animal go when it wishes to escape from restraint, not hitting, striking, or pinching it, nor pulling its tail, feeding when hungry, warming when cold, leaving alone when animal shows signs of being annoyed or angry. Children may learn habits of kindness not only towards pets but toward other animals. Insects are not tormented, squirrels in the park are considerately given nuts or bread and are not stoned, little fledglings are carefully cared for and put out of the way of marauding cats. Children also learn habits of kindness in playing with other children. Many children have to oppose a tendency to bully. They learn not to strike, restrain, kick, scratch, or bite other children; nor to tease or handle roughly children smaller than themselves; they learn not to call names or to say other things that are derogatory. These simple yet basic habits of kindness emerge into derivative habits, partly generalized habits, and habits to more subtle factors in the situation.

As a confact is formed, the tone of voice takes on a kindly set. Gentleness of speech becomes habitual and as such is an integral part of the confact of kindness. The sharply spoken order or the harsh rebuke has no place in the confact of kindness. Kindness also shows itself in more subtle ways in the respect of the personality or individuality of other persons. Giving honor where honor is due by speaking praise, writing a note of congratulation, or otherwise showing respect is an act of kindness. Refusing to contradict the assertions of others or sparing the feelings of others in any way is also an outgrowth of these earlier habits. So kindness grows out of rudimentary habits of physical contact in early childhood into the manifold social interactions of adult life. The *essence* of kindness which serves as a core to unify it is the *avoiding of pain or injury* or the *eliciting of feelings of pleasure*.

Kindness goes through many levels of generalization as the social circle widens, and as social relationships become more complex. In childhood, kindness is a mere matter of avoiding the infliction of physical pain and speaking kindly. But eventually kindness may exhibit itself even in the matter of leniency toward debtors or tolerance toward the beliefs of others. Verbalization would seem to have some influence in consolidating and organizing the habits of kindness, but probably the influence of early habits is far more potent than verbalization in determining the response in some new and unfamiliar situation. Kindness may easily be partial, and this in two ways. A man may be kind in speech but tend toward unkindness in money matters; or a man may be exceedingly kind in helping unfortunate persons and yet have a gruff and burly set of communication reactions. The other type of partiality is much more evident. We all tend to be kind toward certain persons but not toward others. A man may be kind to his family but dictatorial and surly to his employees.

The *test of kindness* is the sort of reaction that one makes when much provoked to anger,

Obedience. — Obedience is the responding to the spoken or written command of others.

Situation: A person or institution; a spoken or written command.
Response: Affirmative response to the command.

There is perhaps no confact which is more simple than this one of obedience. The situation — a command — is definite and objective, and the response is clearly understood; namely, affirmative response to command. Of all confacts this one is perhaps the most talked of and the most stressed in the training of children. In one sense it is a foundation stone to the formation of many other habits and confacts. Obedience is a prime control of conduct, and through its office many a line of conduct can be guided.

Obedience may and should be formed in infancy. If as the mother carries the child each day from one activity to another — from bathing to dressing to eating — she talks of what she is doing as though she were making requests or issuing orders, obedience will be formed — surely and without difficulty. The child will have formed the habit of responding *with* commands or directions, which naturally leads to the conditioned habit of responding *to* commands or directions. Then if obedience is generalized and emphasized as it usually is, the confact is organized and reinforced.

Obedience is particularly prone to imperfection in two ways. Children obey certain commands much more readily than others. They obey commands to do familiar and habitual acts more easily than unfamiliar or unusual acts. Picking up toys and clothes, washing the hands, and brushing the teeth may be readily obeyed where the request to stop a new grimace, to do a new household duty may be rebelled against or need several repetitions. Children are more apt to obey in one situation than another — they may obey at school where they would not obey at home; or they may obey at home where they would not obey at their grandmother's. Partiality shows itself particularly in the response to persons. Strangers are not readily obeyed by children in general. "What right has he to order me to do this?" is their attitude toward strangers. Parents and teachers are most readily obeyed in general, and policemen and officials of any kind, even to porters and elevator men, are quite readily obeyed, as contrasted with the obedience tendered to strangers.

Obedience may become very rarefied. One may obey one's country's call to arms, the demands of the church, or even one's conscience. The mechanisms whereby these more attenuated kinds of obedience are formed follow well-known psychological laws of conditioning. Where we become sufficiently sensitive to responding to commands we obey "the still small voice" which is not a fiction but a reality — inner speech. Obedience, when it has reached this degree of generalization, becomes a valuable ally of loyalty.

Generalizations concerning confacts. —At the risk of repetition, this chapter will be closed with certain generalizations concerning confacts.

1. The eight confacts in this chapter are by no means exhaustive, not even of the extremely desirable confacts. The writer has before him a long list of them including industry, trustworthiness, helpfulness, courtesy, reverence, self-control, good sportsmanship, self-reliance, coöperativeness, honesty, orderliness, resolution, responsibility, and many others. Each of these should be analyzed as has been done for the eight in this chapter. The fundamental, rudimentary habits underlying them should be inventoried, and these confacts should take their place as prime objectives of education.

2. Confacts may be bad as well as good. One may build habits of laziness, irreverence, treachery, disorderliness, or cowardice just as easily as their desirable opposites. In many respects society is organized so that the desirable confacts have more encouragement, but many an unfavorable environment is the breeding place of bad confacts.

3. The confact is merely the response to the exterior situation. Inner attitude or disposition is not considered a part of the confact and is not included in its definition. Attitude or disposition will be treated in a subsequent chapter, but it may be stated here that its function is to heighten or lower the readiness or threshold of a confact and to strengthen or weaken its consequent learning.

4. Confacts do not spring full bloomed, but rest on a foundation of specialized habits. These habits must be learned, and there is no guarantee that one rather than another habit will be learned. In fact many confacts — kindliness, for example — require the overcoming of what seem to be opposing instinctive tendencies. Confacts differ in this dependence on habit. Some confacts, as generosity, seem to be built on a multitude of specific habits. On the other hand, obedience, because its generalization is simple, may easily become generalized. But no confact exists without a foundation of specific habit.

5. Confacts may be coördinated and consolidated by generalization and by verbalization. At first the verbalization is by others, but later the verbalization may be inner and the confact may become apparently self-initiated. Some confacts seem to be little verbalized in our present-day social life. Courage is an example. On the other hand, confacts like cleanliness and obedience are highly verbalized. Probably the efficacy of verbalization in the formation of confacts is over-stressed and its importance over-emphasized by most people. The habit basis of confact is on the whole supreme, the effectiveness of generalization and verbalization being contingent. In some instances verbalization seems highly effective and in other instances non-effective. The factors determining the effectiveness still await analysis and experimentation.

6. Confacts are seldom universal or complete — they may assume all degrees of imperfection. One of the most frequent factors involving perfection is the person involved in the situation.

We usually exhibit the confact most readily toward persons who were factors in learning the original fundamental habits. But other elements in the original learning situation may also tend to make for discrimination or partiality in the confact. A person may be generous with food but stingy with money.

7. Confacts assume their form at different stages. Habits of obedience or disobedience are learned very early in life, although higher forms of generalization or discrimination are always being learned. On the other hand, loyalty is a confact that does not show itself until adolescence, at least except in rudimentary habits. The difference seems to be that the generalization necessary in some confacts such as obedience is extremely simple, whereas the generalization or conceptualizing necessary in a confact like loyalty is on a much higher level of difficulty.

8. Some confacts go rather far afield from their original basic habits or the original connotation. Clean play and clean speech as varieties of cleanliness seem to constitute the clearest instances. Obedience to conscience as a form of obedience is another. Some of these, as the latter, probably are formed easily by simple psychological conditioning. On the other hand, the "clean play" sort probably have independent forces, such as social approval, working in their behalf and the reference to "clean" is only an element of support, a dragging in of a relationship to an already well-formed confact.

Summary. — An analysis has been made of truthfulness, courage, loyalty, cleanliness, frugality, generosity, kindness, and obedience. These do not exhaust the desirable confacts but serve as examples. Confacts may be bad as well as good. Confacts do not include inner attitude or disposition. They rest on a foundation of particular habits. Confacts may be coördinated and consolidated by generalization and by verbalization, but are seldom complete or perfect. All confacts do not develop at the same time — some develop early in life, others later. Some confacts go far afield from their basic habits and connotation.

CHAPTER X

THE PLACE OF VISCERAL REACTIONS IN CONDUCT

Visceral responses to visceral stimuli — Muscular and verbal responses to visceral stimuli — the fundamental urges — Hunger and thirst — Sex — Urination and defecation — Sleep — Erogenous zones — Secondary urges — Relation of interoceptive stimuli to conduct — Purpose — Visceral reactions or emotions — Summary.

Many who have given study to the matter of conduct and character believe that the essence of conduct lies in purposes and the emotions. "Feelings of value," not stimulus-response bonds, are the mainsprings and definitives of conduct, according to these persons. Reference to the emotions has been omitted purposely in the foregoing chapters because it was wished to emphasize the fact that conduct is a response to stimuli. In this chapter this same stimulus-response point of view will be extended to purposes and emotions and it will be shown that here one is also dealing with responses to stimuli, the stimuli in this instance being internal, *interoceptive*. This topic, it must be confessed, is approached with reluctance. One can speak confidently of the muscular responses to peripheral stimuli, as they have been objectively and more or less thoroughly studied. But the study of internal stimulation and response is difficult and the results unsatisfactory. The frontal attack is not possible. To obtain data as to the behavior resulting from internal drives one must experiment with and operate upon animals, use distinctly abnormal and pathological cases, or make long range (and often fantastic) deductions from laws discovered by the physiologists.

All possible reactions given in the scheme on page 35 have been considered except those involving viscera. These are repeated here:

4. Muscular response to visceral stimulus
8. Verbal “ “ visceral “
9. Visceral “ “ peripheral “
10. “ “ “ kinaesthetic “
11. “ “ “ verbal “
12. “ “ “ visceral “

Visceral responses to visceral stimuli. — Let us dispose of the last group first, as, at least directly it has little or no significance for our problem. Our organic processes are hooked up to form a self-integrated system. The process of digestion is a good example. The following statements are from Howell's *Textbook of Physiology:*

> The first stage (of swallowing) consists in the passage of the bolus of food through the isthmus of the fauces. This portion of the movement may be regarded as voluntary, although it is open to doubt whether the entire movement is usually effected by a voluntary act. Under normal conditions the presence of moist food upon the tongue seems essential to the complete execution of the act; and an attempt to make the movement with very dry material upon the tongue is either not successful or is performed with difficulty. . . . When the mylohyoids contract sharply the bolus is put under pressure and is shot into and through the pharynx. Simultaneously, a number of other muscles are brought into action. . . . The whole reflex is therefore an excellent example of a finely co-ordinated movement. . . . Even the comparatively simple wave of contraction that sweeps over the esophagus is due to a reflex nervous stimulation, and is not a simple conduction of contraction from one portion of the tube to another. . . . The stomach receives nerve fibres from two sources, — the vagi and the splanchnics — but its orderly movements are merely regulated through these extrinsic fibres; it is essentially an automatic organ. We may regard the stomach, considered as a motor mechanism, as an automatic organ like the heart. . . . The general arrangement of muscle and nerves (in the intestines) is similar to that prevailing in the stomach, and in accordance with this we may find that the physiological activities exhibited are of much the same character, only perhaps, not quite so complex. . . . When a bolus is inserted into the intestine at any point its effect upon the nerve-fibres is such as to cause a reflex contraction of the muscle above the bolus, that is, toward the

stomach, and a reflex inhibition or dilatation below. . . . There is some evidence to show that the rhythmical contractions of the intestines are muscular in origin (myogenic) while the more co-ordinated peristaltic movements depend upon the intrinsic nervous mechanism.[1]

Other systems — the circulatory, the respiratory, and the reproductive — show the same kind of interaction — stimulus and response — between phases of the organic functioning.

In one sense these reactions are nonconsequential to our problem — they are not conduct. Yet, in another sense, they are the fountain head of conduct. For instance, every interruption, every maladjustment of the organic processes becomes a stimulus which issues into conduct. But the reactions of normal organic functioning are insignificant of themselves in the definition of conduct.

The other reactions in the list divide themselves into two groups — those in which the visceral processes are stimuli and those in which the visceral processes are reactions.

Muscular and verbal responses to visceral stimuli — the fundamental urges. — Muscular and verbal responses to visceral stimuli are in one sense of high importance in the definition of conduct. These particular reactions are the drives or urges or motive power of conduct. The vital processes furnish some of the fundamental motives of life. Hunger, thirst, and sex are stimuli that arise out of the normal functioning of the vital processes which we call motives or drives. Abnormal conditions also produce motivating stimuli. A headache acts as a distraction; if severe it will throw conduct quite out of gear. Fatigue leads to drowsiness or a desire for rest, which is a strong motive.

Hunger and thirst. — These vital processes that act as urges or drives are specific stimulators. Cannon, who has made a careful investigation of the nature of hunger, places the seat of hunger in the contractions of the musculature of the stomach when empty. Howell says: "The sensory apparatus for hunger lies in the walls of the stomach, probably in the muscular coats, and is stimulated by the contractions of the musculature." Thirst is likewise an organic state with a definite stimulating influence that leads to conduct. Of this Howell says:

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[1] Howell, W. H.: *A Textbook of Physiology*, pp. 718, 719, 720, 728, 730, 731. W. B. Saunders Company, 1924.

> We know little or nothing about the nervous apparatus involved; but it may be assumed that when the water content of the body falls below a certain amount the nerve-fibres in the pharyngeal membrane (fibres of the glosso-pharyngeal nerve) are stimulated and give us the sensation of thirst. That we have in this membrane a special end-organ of thirst is indicated, moreover, by the fact that local drying in this region, from dry or salty food, or dry and dusty air, produces a sensation of thirst that may be appeased by moistening the membrane with a small amount of water not in itself sufficient to relieve a genuine water need of the body.[1]

Sex. — Sex is one of the strongest of these internal stimuli. Concerning this Allport says:

> The original stimulus for sex responses is not, as is popularly supposed, an individual of the opposite sex. It is rather an internal excitant. In the male it is the gradual distention of the seminal vesicles, a condition requiring a fairly periodic discharge of their contents. The distention produces an increase of tonicity in the wall of the vesicle, and this internal activity, combined, no doubt, with similar glandular effects in other parts of the pelvic viscera, stimulates the interoceptive end organs in these parts. In the female the excitatory visceral changes are probably caused, not by distention, but by some hormic (glandular) process occurring about the time of menstruation.[2]

Physiologists are not agreed upon the exact mechanism which serves as the interoceptive sexual excitant. Burton-Opitz, for instance, says:

> The act of ejaculation is controlled by a reflex center which is situated in the lumbar segment of the spinal cord. The latter may be activated by afferent stimuli arising in the genital organs and evoked chiefly in Krause's corpuscles with which the glans penis is abundantly supplied.[3]

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[1] HOWELL, *op. cit.*, p. 289.

[2] ALLPORT, F. H.: *Social Psychology*, p. 69. Houghton Mifflin Company, 1924.

[3] BURTON-OPITZ, R.: *A Textbook of Physiology for Students and Practitioners of Medicine*, p. 1128. W. B. Saunders Company, 1920.

Urination and defecation. — Urination and defecation are other organic processes which are organically stimulated. In these cases pressure seems to be the stimulating origin.

Sleep. — Relaxation, rest, and sleep are drives. The seat of these drives may be placed in the muscular system or the nervous system, perhaps both. These drives are due to the metabolic state of the muscles or nerves. Quite probably the converse state of metabolism known as rest also constitutes a drive to activity.

Erogenous zones. — The erogenous or sensitive zones furnish another set of drives or impulses that lead to such activities as thumb sucking, fondling, caressing, and the like.

Secondary urges. — Physiologists recognize several other dominant human urges. The sources of these urges are difficult to trace. The best that can be done in many cases is to conjecture. One plausible and fascinating hypothesis is that these other urges are learned derivatives of the organic urges already mentioned. On this hypothesis the hunger and thirst drive would be the origin of such urges as: (1) the urge to collect and hoard and (2) the urge to hunt and destroy. The sex drive would be the origin of: (1) the urge to secure sympathy; (2) the urge to relieve suffering; (3) the urge to beget children; (4) the urge to care for and protect begotten children; (5) the urge to be in a group of the same species; (6) the urge to secure social approval; and (7) the urge to avoid social disapproval.

Baldly stated, this surely makes the problem too simple. In general cases, such as the urge to secure social approval, both the hunger and sex drives have a part. Some of these urges would seem to be instinctive, at least in part, and many worthy students of psychology have so called them. In the case of some, as the gregarious impulse, the origin of the impulse is probably a blending of organic and peripheral stimulation.

Recent work by the behaviorist as well as the older work of the Freudian school makes it possible for one to understand how such a drive as gregariousness may be established. Some children are totally unable to amuse themselves without the presence of other children. All the activities which they have learned and exercise require the presence of another child. These play activities lead back to infancy. The first and most satisfying play was with other children or with parents. This play was a response to rested and ready muscles and nerves as well as to the most active and interesting elements in the situation — people. Again, all acts in which the drive of hunger is satisfied require the presence of and reaction to other people, especially the mother. Through learning, any response to the elements of hunger at feeding time requires the presence of other people.

Relation of interoceptive stimuli to conduct. — These interoceptive stimuli do not issue into definite or uniform response. Rather each organism has to learn how to satisfy or complete these urgent and recurring stimuli. Where this response is not definitely established, or where the situation is unfamiliar, the response is a series of restless, random movements which persist until relief is found. Almost all animal experimentation has used some internal stimulus to activity and has forced learning as a response to a dominant urge, particularly hunger. In normal living we have learned certain successful responses to these interoceptive stimuli, and hence it can truthfully be said that visceral-muscular or visceral-verbal bonds have been established. These visceral-muscular bonds or visceral-verbal bonds do not differ in kind from the more familiar peripheral-muscular bonds. A scratch on the skin of the hand which leads to a withdrawal of the hand is a stimulus which has the same impulsive or urgent character that hunger or sexual appetite has. Likewise a screeching sound or a dazzling light has impulsive or urgent characteristics.

The fact that the interoceptive stimuli do not have their specific reactions means that for the final and definitive reaction there must be a coördinate peripheral or kinaesthetic stimulus.

Hunger does not of itself lead to conduct; there must be food, or the absence of food which necessitates its search. Hunger may be appeased by milk or honey, by tripe or steak, by white or whole-wheat bread. Indeed the child who is used to white bread will prefer it to the bread of darker color. The stomach does not know what is best for the body. Likewise, the interoceptive stimuli to the sexual reaction are actually secondary to the definitive stimuli of touch, pressure, sight, or certain verbal stimuli. Again one may rest as well in Chicago as in Boston, although the bed at home, even though less comfortable, may be more conducive to sleep. Our fundamental drives require only satisfaction — they are not particular about ways and means.[1]

This fact is of the highest importance in connection with the definition of conduct. The interoceptive stimuli do not define conduct — they simply provide the drive. Conduct is defined by the peripheral stimuli which actually govern the precise nature of the response. From one point of view the organic drives may be ignored. They do not define conduct — they are merely irritating and contributing concomitants. But in another sense, the organic drives cannot be ignored. These drives are cyclical. Unlike the pain sense on the skin which occurs by chance as the organism meets harmful objects, the organic drives operate in cycles. Hunger occurs regularly, every three or four hours as the digestive process empties the stomach. The sexual appetite has its rhythms which occur monthly with regularity in the female and with about the same frequency but with less regularity in the male. These rhythms in the organic processes present a constant *source* of conduct stimulation as long as the organism is alive. These stimulations cannot be neglected. To neglect them is to neglect vital calls of the organism. In this sense the organism is self-propelled and internally driven. In a general way these organic drives define conduct because unless they are relieved in suitable ways as often as they occur, maladjustment results. One cannot plan a line of conduct that disregards these fundamental drives to conduct. An educator would fail who set up a curriculum which ignores these drives. A society would fail which attempted to establish laws and customs which fail to satisfy these fundamental needs. But that is as far as one can go. The precise conduct itself must be defined by the peripheral stimuli. As long as one satisfies the needs of the organic drives, he can proceed to forget them in defining conduct. The organic drives are conditioners rather than determinants of conduct.

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[1] In cases where a person is "particular" as when he has preferences, tastes, or choices it is not the internal stimulating organic condition that determines the preference. Tastes and choices are habits that are conditioned by peripheral or kinaesthetic stimuli. The stomach is not particular about the kind of food which it receives. Almost anything in the way of food will appease hunger once it has passed the censorship of sight, smell, and taste.

Peripheral-muscular and kinaesthetic-muscular responses that help alleviate the organic irritations of hunger, sex, and the like, are conditioned reactions. The baby early learns to reach for food and to bring it to his mouth with his hand. Indeed, there is strong evidence that this particular reaction is instinctive. But this primitive grasping soon becomes overlaid with a familiarity with and response to plates and cups, spoons and forks, chairs and tables, various persons, rooms, and houses. Each of these becomes conditioned as a stimulus and acts as a cue by which successful reactions are made to alleviate the organic urges. This ramification goes on indefinitely.

Concerning this Carr says:

> The extent to which these motivating stimuli determine the character of our social and mental development can hardly be exaggerated. Hunger motivates all of the various activities immediately involved in the production, distribution, and preparation of food. Clothing, heat, and shelter arise in part out of man's need for an equable temperature. The activities involved in the satisfaction of these two motives constitute a very large part of the industrial operations of society, and these industrial operations in turn stimulate the development of accessory industries and arts, promote the development of the material sciences, influence our national antagonisms, increase our social contacts, aid in the dissemination of knowledge, and give rise to many problems of politics, law, and social welfare. These

economic motives tinge practically every aspect of mental life. The sex motive also has its wide ramifications. It exerts an influence upon dress, social customs and manners, art, literature, and law. It is indirectly responsible for the family organization of society and the various agencies concerned in the education and care of the young. The motives arising from the abnormal conditions of the organism are largely responsible for the development of sanitary knowledge and the medical sciences, the construction of sanitariums and hospitals, the manufacture and sale of drugs and medical supplies, the profession of nursing, etc.[1]

No special proof is necessary for this learning. It is evident in our everyday observation. Every experiment of the animal psychologist testifies to this sort of conditioning. Indeed, some have gone so far as to state that all activity presupposes concomitant organic stimulation of some sort or other. This is a hypothesis that is extremely fascinating, but from one point of view not very important. Even if all activity were *paralleled* by organic states to act as stimuli without which the activity would not occur, such organic states would in no way define or differentiate conduct. This in part explains the emphasis on the external features of habit formation given in previous chapters.

Purpose. — When particular objects act as stimuli to responses, the dynamic quality which they possess is sometimes spoken of as purpose. A baby's zwieback bread sticks are kept in a tin cracker box. When he comes to the table in his high chair he reaches for the tin box and takes the cover off. If he cannot reach the box, he makes a commotion until the box is placed within reach. One may say that the baby has a *purpose.* The box is a stimulus to his reaching and grasping. But this reaching and grasping is conditional, depending on two things — one is that the baby is hungry and the other is that the baby recognizes it as the box which contains his zwieback. Every act of conduct usually fulfils these two conditions. In the first place it must fill the needs of some internal drive, and in the second place it must be a peripherally conditioned habit which is the result of learning. Failure to keep both of these factors in mind is responsible for much of the confusion regarding conduct training. On the one hand, there are those who think that it is sufficient to arouse the desire or purpose in order to learn a certain line of conduct. Exhortation, preaching, and the inculcation of ideas are the means used. The creation of an enthusiasm is taken to be the equivalent of the formation of conduct. The religious revival depends for its results solely on this. On the other hand, an attempt to form a habit without a purpose is sure to be difficult if not impossible. If the activity results from compulsion, a drive of some kind (internal as well as external) is present, although it is not a direct drive and the result is uneconomical. Nevertheless it must be remembered that with conditions of social living as they are, even a skill or habit formed under compulsion or without its own purpose or drive is in a good way toward becoming purposeful. Almost any skill or habit may become the handmaiden to some drive. The child forced to practise on the piano eventually finds the music interesting when a certain proficiency is reached. Many a boy has been urged on through tedious, uninteresting study to pass his college entrance examinations and has enjoyed work in college afterwards.

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[1] CARR, H. A.: *Psychology.* Longmans, Green and Company, 1925.

Conduct, then, is a resultant reaction of peripheral and internal stimulation. Of the two, the internal organic stimuli are apt to be *weak* and *persistent.* These two facts have important bearings on the nature of motive or drive. As was stated on page 28, stimuli reinforce one another. Clinching the fist will reinforce the knee jerk, as will a well-timed, loud sound. So the organic stimuli reinforce those peripheral stimuli to which they have been linked in the process of learning. Likewise weak, persistent stimuli reinforce or facilitate other stimuli. The organic stimuli provide a continuity and a driving force which apparently gives momentum to a weakly linked series of acts. This driving force which carries through a coördinated chain or series of weakly linked acts we term purpose.

Sherrington has used the terms *consummatory reactions* and *preparatory reactions* to indicate respectively those reactions which bring the final alleviation to the irritating organic state and those which merely contribute to the consummatory reactions. The preparatory reactions become linked to one another and to the consummatory reactions through the process of learning.

Every act is peripherally or kinaesthetically stimulated and is defined by the peripheral or kinaesthetic stimulus. Most acts are also facilitated by organic stimuli, which cause them to assume a continuity in the service of the animal's needs. The interoceptive group of stimuli provides drive and continuity but not direction; the exteroceptive and proprioceptive group provides direction as well as drive.

Since purpose is merely the name given to reactions resulting from a coördination of internal and external stimulation, it may be disregarded in conduct control and guidance. If one knows a child's habits and builds on a basis of these habits, no more is necessary. If a child, just starting to play in the sand box, shows marked obstinacy and stubbornness when taken away to be tested, one should remember that this is the normal response to *interruption*. One may say that the child's purposes are thwarted, but a more enlightening method of viewing the situation is a study of situation and response. The project method attempts to utilize children's purposes, but a more intelligent method will study the methods of building habits on habits already acquired. This must include, however, responses to words, as when one works to pass tests in school.

Likewise the building of purposes is identical with the building of habits or skills. Much is said today about the building of purposes of reading or writing in school. It is true that it is often possible to build a sort of intrinsic interest or purpose. One may get a child interested in taking up long division because he sees that it is necessary for solving certain problems or because he has to have it in order to be promoted. But all these are at the same time habits. The baby reaching for the cracker box is responding to the sight of the box, but we say that he has the purpose of getting his zwieback. Many of the purposes in adult life are verbal. Practically every endeavor which is for some end not in the immediate environment, such as working for a diploma, for money, or for fame, involves ideo-motor bonds. But they are habits — definite responses to stimuli — nevertheless. Forming purposes reduces to forming habits or skills.

Visceral reactions or emotions. — There are left for discussion those reactions in which the responses are in the viscera and the stimuli are peripheral, kinaesthetic, or verbal. These reactions are in part mediated through the sympathetic division of the autonomic nervous system, and are in response to those situations where the individual wishes to resist or escape injury or its derivative, danger, or confinement. Probably the elementary form of these stimuli is any stimulus of sufficient magnitude, such as a loud sound, bright light, rapid motion, irritation of the skin, or confinement. Cannon has demonstrated that these visceral reactions constitute the method of the organism in concentrating its energies for the muscular activity which is imminent in such a situation. These reactions constitute the basis of the emotions, although the term emotion is usually reserved for the particular awareness of the stimuli of the visceral reactions, coupled with awareness of the muscular response that we make. A list of the visceral reactions is a list of the organic reactions and disturbances which we call emotional. Tears gather in the eyes, the pupils of the eyes are dilated, the salivary glands are inhibited, the hair tends to become erect, sweat will gather on the surface of the body, there may be alternations of paling and flushing, the heart accelerates in action, the stomach stops its secretions and movements, the arteries of the intestines are constricted, breathing becomes faster, the adrenal glands are stimulated, and they in turn stimulate the liver to pour sugar into the blood stream. All these internal adjustments help to make the organism as a whole ready for emergency, while for the time being the organic processes are stopped or retarded.

The stimuli causing these radical visceral adjustments have been made the subject of experimental study by John B. Watson. He finds that in infants, loud noises and withdrawal of support are the only stimuli which call forth typical fear reactions and that restraint of bodily movements is the only stimulus calling forth rage where there has been no possibility of learning to respond by either fear or rage. Watson's conclusion is that all other stimuli for fear or rage are learned. Watson has demonstrated the mechanism by which these conditioned or learned emotional responses are acquired. Using Albert *B*. as subject, he reports the following:

> Eleven months, three days old. (1) White rat which he played with for weeks was suddenly taken from his basket (the usual routine) and presented to Albert. He began to reach for rat with left hand. Just as his hand touched the the animal the bar was struck immediately behind his head. The infant jumped violently and fell forward, burying his face in the mattress. He did not cry, however.
>
> (2) Just as his right hand touched the rat the bar was again struck. Again the infant jumped violently, fell forward, and began to whimper.
>
> On account of his disturbed condition no further tests were made for one week.
>
> Eleven months, ten days old. (1) Rat presented suddenly without sound. There was steady fixation but no tendency at first to reach for it. The rat was then placed nearer, whereupon tentative reaching movements began with the right hand. When the rat nosed the infant's left hand the hand was immediately withdrawn. He started to reach for the head of the animal with the forefinger of his left hand, but withdrew it suddenly before contact. It is thus seen that the two joint stimulations given last week were not without effect. He was tested with his blocks immediately afterwards to see if they shared in the process of conditioning. He began immediately to pick them up, dropping them and pounding them, etc. In the remainder of the tests the blocks were given frequently to quiet him and to test his general emotional state. They were also removed from sight when the process of conditioning was under way.
>
> (2) Combined stimulation with rat and sound. Started, then fell over immediately to right side. No crying.

(3) Combined stimulation. Fell to right side and rested on hands with head turned from rat. No crying.

(4) Combined stimulation. Same reaction.

(5) Rat suddenly presented alone. Puckered face, whimpered and withdrew body sharply to left.

(6) Combined stimulation. Fell over immediately to right side and began to whimper.

(7) Combined stimulation. Started violently and cried, but did not fall over.

(8) Rat alone. The instant the rat was shown the baby began to cry. Almost instantly he turned sharply to the left, fell over, raised himself on all fours and began to crawl away so rapidly that he was caught with difficulty before he reached the edge of the mattress.[1]

In this light the major part of our emotional life is learned.

Modern psychology as opposed to an older psychology tends to believe that the distinctive feature of an emotion is the muscular response rather than the visceral response. James, for instance, believed:

> Were we to go through the whole list of emotions which have been named by men, and study their organic manifestations, we should but ring the changes on the elements which these three typical cases (grief, fear, and hatred) involve. Rigidity of this muscle, relaxation of that, constriction of arteries here, dilation there, breathing of this sort or that, pulse slowing or quickening, this gland secreting and that one dry, etc., etc. We should, moreover find that our descriptions had no absolute truth; that they only applied to the average man; that every one of us, almost, has some personal idiosyncrasy of expression, laughing or sobbing differently from his neighbor, or reddening or growing pale where others do not. . . . The various permutations and combinations of which these organic activities are susceptible make it abstractly possible that no shade of emotion, however slight, should be without a bodily reverberation as unique, when taken in its totality, as is the mental mood itself.[2]

This point of view is now generally abandoned. We know that the sympathetic division of the automatic nervous system tends to work on the all-or-none basis. The differentia between one emotion and another would seem to be our muscular adjustment and response. In anger we may kick, punch, bite, or scratch. In fear we may run or stand stock still. Indeed anger and fear may suddenly be interchanged. The cat pursued by the dog may suddenly turn and offer its claws, and it becomes the dog's turn to show fear. The evidence for this lies in the structure of the sympathetic nervous system. In the sympathetic system, plexuses or gangli are situated outside of the central nervous system. These relay stations make it possible for definite stimuli to be widely diffused. As Cannon says,[1] in different circumstances there may be variations in the degree of activity of different parts; for example, it is probable that dilation of the pupil in the cat occurs more readily than erection of the hairs. But the outstanding characteristic is diffuseness of response. For these reasons, conduct is defined by the peripheral stimulus and the muscular reaction. The organic adjustment seems to be of no consequence in conduct, except as it makes the conduct more impulsive, more energetic, and more forceful. But the impulsiveness or energy of conduct does not define it. From this point of view emotion, as such, may be disregarded in defining conduct. This repeats what has been said concerning the organic drives.[2]

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[1] WATSON, J. B.: "Experimental Studies on the Growth of the Emotions," *Pedagogical Seminary and Journal of Genetic Psychology*, June, 1925.

[2] JAMES, WILLIAM: *Psychology*, II: 447, 450. Henry Holt and Company, 1890.

In another sense one should take emotion into account in connection with conduct. Emotion as we have seen involves serious derangement of the normal organic functioning and if frequently expressed or long continued, may have disastrous effects on the visceral system. If emotion becomes pathological, ill health may result in the form of digestive or heart disturbances, insomnia, loss of weight, neurasthenia, and fatiguability. This outcome of emotional conduct must be reckoned with. But this is more of the nature of a by-product of conduct than an essential feature of conduct itself.

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[1] Cannon, W. B.: *Bodily Changes in Rage, Pain, Grief and Fear*, pp. 26–29. D. Appleton and Company, 1915.

[2] Emotions do define conduct in a decisive but negative way by making activity so forceful and impulsive as to shut out alternative modes of activity. Once emotion is aroused, an individual seems to have no alternative but to carry through the activity commenced. Emotional activity is notoriously blind and is impervious to reason. The man who starts a fight will not stop until forced to or until the original angry impetus dies down. The blindness of conduct which is under the influence of emotion is the cause of much of the distressing pathological conduct which is so common. The relation between these emergency reactions and the exaggerated selectivity of response is given extended discussion in Chapter XIII on Pathological Conduct.

What then of emotional conduct? Can conduct be defined without reference to the viscera? Can the visceral reactions be ignored as far as conduct is concerned?

Andrus has included in her inventory of the habits of children from two to four years of age the following seventy-five emotional habits:

1. Come to the nursery school unwillingly?
2. Cry at nap time for (*a*) mother, (*b*) sister, (*c*) home?
3. Cry when left with adults other than teachers?
4. Ask for his mother?
5. Cry to go home?
6. Watch for his mother or father at night?
7. Cry easily when hurt?
8. Cry at the table?
9. Strike others without apparent reason?
10. Strike in defence of self?
11. (*a*) Resist, (*b*) pull, (*c*) kick, (*d*) strike in defence of possessions?
12. Throw himself on the floor when crossed?
13. Cry when crossed?
14. Cry and hit when crossed?
15. Sulk when crossed?
16. Strike or hit the furniture when crossed?
17. Do something he knows he should not do when crossed?
18. Show annoyance at the action of any other child?
19. Show annoyance at the action of any special child?
20. Show annoyance at the action of teacher or any other adult?
21. Vomit as a result of anger?
22. Seem frightened by (*a*) teacher, (*b*) children, (*c*) adults?
23. (*a*) Shrink, (*b*) cringe, (*c*) cry when spoken to?
24. (*a*) Shrink, (*b*) cringe, (*c*) cry at a loud noise?
25. Become frightened when climbing?
26. Become frightened when up high?
27. Become frightened when swinging?
28. Fear thunderstorms?
29. Have special or peculiar fears? Illustrate.

30. Fear animals?
31. Fear (*a*) worms, (*b*) insects?
32. Worry?
33. Vomit as a result of fear?
34. Hit or abuse pictures?
35. Destroy property?
36. Tear flowers or pick them to pieces?
37. Laugh at the mistakes or disasters of others?
38. Appear listless, *i.e.* indifferent? Illustrate.
39. Giggle?
40. Laugh without restraint?
41. Let others take his toys without protest?
42. Hesitate to do anything new?
43. Seem conscious of the observation of others? Illustrate.
44. Seem to be easily humiliated?
45. Seem to be easily confused?
46. Show indications of stereotyped reactions? For example, feel it necessary to run around the sand box before going down the slide or starting any other activity?
47. Show marked dislike for any person, thing, or food? Illustrate.
48. Enjoy inflicting pain?
49. Enjoy seeing others suffer?
50. Enjoy inflicting pain on himself?
51. Enjoy having others inflict pain on him?
52. Like disgusting things, scenes, or smells? Illustrate.
53. Have to be put in his chair at the table?
54. Have to be coaxed to taste his food?
55. Have to be forced to taste it?
56. Push his food away?
57. Refuse to swallow his food, *i.e.*, spit it out?
58. Hold it in his mouth a few minutes before swallowing?
59. Show any tendency to regurgitation, *i.e.* allow the muscles which control his swallowing to reverse their action?
60. Eat food picked up from the floor?
61. Put things in his mouth?
62. Play with his belt or clothing?
63. Pick his fingers, nose, or face?
64. Bite his nails?
65. Suck his thumb?
66. Suck his fingers?
67. Twist his hair?
68. Swing his foot?
69. Stumble or fall?
70. Twitch in any part of his body?

71. Indulge in peculiar facial expressions?
72. Seem excited by the presence of other children?
73. Seem excited by any activity?
74. Have rapid emotional transitions?
75. Show jealousy of playmate or adult? Illustrate.[1]

Can the viscera be disregarded in defining these? Take No. 28, for instance, "Fear thunderstorms?" We all recognize the viscera as one component in the fear of thunderstorms. But if the viscera were the only response made, they would have no conduct significance (although it might have a decided significance for health). The fear of thunderstorms is of significance in conduct only if there is some muscular adjustment such as running into a closet, or crying, or covering the ears. One should consider the visceral reactions, perhaps, in deciding as to the desirability or undesirability of the conduct, but the conduct itself is defined entirely by peripheral stimuli.

Not only the sympathetic division but the cranial and sacral divisions may be peripherally stimulated. Watson[2] tells of crucial experiments to demonstrate this. One of the more recent experiments is described as follows:

> After determining the ordinary rate of the flow of the salivary gland, a bar of chocolate almond was handed to the subject. He was allowed to smell it, to bring it to his lips, and to hold it at arm's length. The following table shows the result of this experiment:
>
> | Stimulus | Response |
> |---|---|
> | Normal rate | about one drop per minute |
> | Chocolate placed in subject's hand: | |
> | 1st minute | 4 drops |
> | 2nd minute | 3 drops |
> | 3rd minute | 4 drops |
> | Subject smelled chocolate | 5 drops |
> | Brought chocolate to lips but kept mouth closed | 9 drops |
>
> Unless this method had been employed, we would not have known that the mere sight and touch of food had such a stimulating effect.

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[1] ANDRUS, R.: *A Tentative Inventory of the Habits of Children from Two to Fou Years of Age.* Teachers College Contributions to Education, No. 160, 1924.

[2] WATSON, J. B.: *Psychology from the Standpoint of a Behaviorist,* pp. 30, 31 J. B. Lippincott Company, 1924.

Likewise sexual reactions may be aroused by peripheral stimulation such as touch of the erogenous zones, conditioned sights or sounds, or even one's own thoughts.

In the previous example the increased saliva was not of importance from the point of view of conduct. The only thing of importance from the conduct standpoint was the bringing of the food to the mouth with the eventual eating of it. Psychologists are fairly agreed that this was caused by a combination of organic hunger conditions and the visual stimulus, and that the salivary response was merely a response and not a stimulating factor.

Summary. — Organic states and processes as stimuli are fundamental drives or urges to activity, but they are of an impulsive and not directive nature. On the whole they may be disregarded as far as the definition or control of conduct is concerned. They force some kind of conduct because of their cyclical recurrence but they do not define what the precise conduct shall be. The precise conduct is determined by peripheral and kinaesthetic stimulation. Likewise peripherally conditioned organic activity such as an emotion is a concomitant or parallel to certain forms of conduct but does not define it except in its impulsive or energetic quality. The precise conduct itself is defined and determined by the peripheral or kinaesthetic situation.

There are two exceptions to the general statement that visceral stimulation and reaction may be ignored. In the first place, since the organic drives are so urgent and cyclical, they cannot be ignored. In other words, we cannot set up conduct objectives without providing means of satisfying them. Nevertheless, the demands are general, not specific, and they may be satisfied in many alternative ways. In the second place, one cannot disregard the upsetting of the normal visceral functioning by the activity of the sympathetic division. In this sense again, conduct objectives should not be set up which ignore what sort of organic activity is to be its accompaniment. But this merely sets limits to desirable conduct and does not define it.

CHAPTER XI

ATTITUDES

Feelings claimed to be determinants of conduct — Feelings not part of any reaction system — Feelings depend on metabolic state of synapse — Relation of feelings and habits — Readiness — Attitude considered as an organic drive — Attitude as muscular adjustment — Attitude as generalized conduct — Attitude as set or readiness — Attitude as emotional response — Attitude meaning feelings — Attitude meaning verbal response — Attitude not a specific response — Verbal attitude not a substitute for behavior — Verbal attitudes important in a democracy — Important social issues — Summary.

Feelings claimed to be determinants of conduct. — One by one all the reaction systems of the body have been passed in review. The conclusions of the last chapter were that the *organic* functionings of the body — both as stimuli and responses — do not define conduct responses but merely stimulate or temper them. The opposite point of view regarding conduct may be expressed as follows: Parallel with our acts go feelings of acceptance or aversion. It matters not whether they are called emotions or something else. These feelings seem to have fundamental backgrounds. Apparently we all agree that certain substances which are oily or bitter or putrid such as castor oil or quinine or decaying flesh are distinctly unpleasant whereas sugary or nutty substances are very agreeable. Two consonant tones are pleasant while two dissonant tones are very disagreeable. If a lady were to wear a carmine sweater over a scarlet dress, the two colors would clash so as to "swear at each other." On the other hand, we all know how pleasant complementary colors are side by side. These likes and dislikes seem to be native. Everyone is also equipped with a host of likes and dislikes that are acquired. Prince tells the story of a woman who was greatly irritated by hearing a church bell ring. Most of us as adults are annoyed and irritated if our hands or faces are dirty. On the other hand, we feel particularly pleasant and satisfied to be dressed up ready for an appearance at the theater. Ragged cuffs annoy, as does an untidy desk. The same kind of irritation is experienced when we or our friends come under the ban of one of the common superstitions, such as walking under a ladder or putting an umbrella up in the house. Each one of us can catalogue personal obsessions of this kind. From these it is an easy step to those feelings that accompany our moral acts. Some persons have a distinctly uncomfortable feeling if they deliberately allow a storekeeper to give them back too much change, or if they see someone else permit it. Other persons are made highly indignant if they see someone step into the middle of a waiting line. On the other hand, although the feeling of satisfaction is not so vivid when one obeys one's conscience, there is at least a sense of well-being and of complacency accompanying the knowledge that one has been true to oneself. This is what we mean by conscience, and conscience is a powerful control of conduct. These very feelings or attitudes are what determine conduct. One would much sooner trust a man who has a love for truth, honor, kindliness, and the other fine things of life than the wooden puppet who is merely a creature of habit, dependent on the sway of external environmental forces. Because these "feelings of value" are so important, they are the foundation of moral education. Moral education should above all else strive to inculcate feelings of value, thereby building up inner resistances to evil and inner desire to do the right. Such is the position of many persons who believe wholeheartedly in the good life and are enthusiastic over the possibilities of moral education. Let us inquire into the psychology of such a position.

Feelings not part of any reaction system. — In the first place these feelings are evidently not a part of any reaction system.

Neurology discloses no paths or tracts in the central nervous system that may be said to be the specific carriers of affective experiences. Introspection also supports this position. (1) Pleasantness and unpleasantness always belong to some object and are never experienced in isolation. (2) Pleasantness and unpleasantness are aspects of the original response to an object. One does not first respond to an object and then later have a feeling concerning the object. The feeling is a part of the original response. Pleasantness and unpleasantness are not specific objects of attention. If one attends to a sensory object, it becomes more clear and distinct, but if one attempts to attend to a feeling, it disappears. (3) Feelings seem to have no specific sensory endings and cannot be localized in any place. They seem to have no place of origin and no specific place of reaction. Sometimes they may seem to belong to the object which stimulates them, but that is our own interpretative projection of them. (4) It is well known that pleasantness and unpleasantness are mutually exclusive. Experiments have been conducted in which two items, one normally eliciting high positive feeling reactions, the other high negative feeling reactions, are brought into the same experience field. The affective tone of the experience is either positive or negative or there is a rapid shift, but the two do not appear simultaneously. These facts all lead to the conclusion that feelings which loom so important as controls of conduct are not a reaction system, but somehow are features or aspects of our already existing reaction systems.

Feelings depend on metabolic state of synapse. — So little is known regarding the physiology of nervous conduction and especially of the relationship between physiology and behavior, that to attempt to locate these feelings is to hazard a guess. However it is at the synapse that one must look for the phenomena which will explain affective states.

There are several lines of evidence that support the hypothesis that the basis of affective states is to be found in the different conditions of the synapses. (1) Fatigue states are highly tinged with unpleasantness. The whole discussion of fatigue is clouded by this confusion of feeling with work done. Introspectively we know fatigue as loss of interest, ennui, the feeling of being bored, desire to do something else, distaste even bordering on disgust. But where the feeling tone may drop steeply toward unpleasantness, the work curve may continue horizontally. Experiments on exposed nerves show that the nerve fiber is relatively unfatiguable. Howell says, "Brodie and Halliburton have found that the nonmedullated fibers in the splenic nerve can also be stimulated for many hours without losing their power of conduction, — that is, without showing fatigue. Many other observers have obtained similar results, which have confirmed physiologists in the belief that the nerve fibers may conduct impulses indefinitely, or, in other words, that their normal functional activity may be carried on continuously without fatigue."[1] Sherrington says in this connection, "The waning of a reflex under long maintained excitation is one of the many phenomena that pass in physiology under the name of fatigue. It may be that in this case the so-called fatigue is really nothing but a negative induction. Its place of incidence may lie at the synapse."[2] Putting these facts together — the incidence of unpleasant feeling with fatigue and the relative unfatiguability of the nerve fiber — leads to the conclusion that the unpleasant feelings of fatigue are connected with metabolic states at the synapse.

(2) Feelings are rhythmic in character. Ladd and Woodworth say, "Feelings, like all other mental phenomena, occur under *time — form;* they are, in general, rhythmic in character, and change in respect to content, tone, and intensity, with a movement marked more or less distinctly by the quality of

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[1] HOWELL, W. H.: *A Textbook of Physiology*, p. 118. W. B. Saunders Company, 1924.

[2] SHERRINGTON, C. S.: *The Integrative Action of the Nervous System*, p. 222. Yale University Press, 1906.

periodicity."[1] Sherrington made a careful study of this phenomenon of periodicity. The conducting mechanism shows undulatory periods of greater and less conductivity, called the refractory phase. "By refractory phase is understood a state during which, apart from fatigue, the mechanism shows less than its full excitability"[2] . . . "The seat of the refractory phase of the scratch-reflex lies where we traced it, in the central nervous organ itself, and somewhere between the motor neurone to the muscle and the receptive neurone to the skin."[3] . . . "The reflexes of which refractory phase constitutes a prominent feature are those concerned with cyclic actions occurring in rhythmic series; such as the scratch-reflex, reflexes of swallowing and blinking, and probably the rhythmically recurring reflexes concerned in the limbs."[4] The rhythmic character of the feelings would also suggest that they are centrally initiated.

(3) This evidence is quoted directly from Ladd and Woodworth:

> The *intensity*, too, of feelings rises and falls alternately in dependence upon the rhythmic movement of the nervous processes and of the train of ideas. No feeling is kept at a long continuous level with respect to its vigor and pitch of strength. The law of quickly alternating exhaustion and repair of nervous elements underlies, to a large extent, this rhythmic movement of the intensity of the feelings. This is one of the many proofs which go to show that the conditions of the end-organs and of the central organs are determinative of the tone and strength of feeling. Even when we are strictly attending to our painful feeling, the toothache is not a perfectly uniform and steady strain; even when we are doing our best to abstract attention from the pain, we succeed only intermittently. But the course of the ideas must also be taken into account as influencing the rhythm of feeling.[5]

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[1] Ladd, G. T. and Woodworth, R. S.: *Elements of Physiological Psychology*, p. 514. Charles Scribners' Sons, 1911.

[2] Sherrington, C. S.: *The Integrative Action of the Nervous System*, p. 45. Yale University Press, 1906.

[3] *Ibid*, p. 65.

[4] *Ibid*, p. 65.

[5] Ladd, G. T. and Woodworth, R. S.: *Elements of Physiological Psychology*, pp. 514, 515. Charles Scribners' Sons, 1911.

This evidence would seem to eliminate definitely feeling as an organic sensation and would make it a condition of the central nervous system.

(4) The fact that pleasantness and unpleasantness do not occur simultaneously precludes these affective states from being specifically determined by any special sensory tracts. In fact, all of the arguments against the view of feelings as special sensations are negative arguments for placing the seat of the feelings in the central nervous system.

(5) What is known as the *law of effect* in learning, namely: "The individual tends to repeat and learn quickly those reactions which are accompanied or followed by a satisfying state of affairs. The individual tends not to repeat or learn quickly those reactions which are accompanied or followed by an annoying state of affairs,"[1] is added evidence that the affective states of pleasantness and unpleasantness have their seat at the synapses. Learning we know to be a permanent alteration of some sort of the synapses. If these affective states are factors in learning, then naturally they also are to be referred to metabolic conditions of the synapses. At least, it would be folly to think of the affective states as "blends of organic sensations" and to conceive how these specific sensations could so profoundly influence learning.

The conclusion is that the affective states of pleasant and disagreeable feeling may be referred for their origin to the metabolic states of the synapses involved.

Relation of feelings and habits. — This places the feelings in definite relationship to habits. Feelings would seem to be a complement to readiness. The metabolic state of the synapse may be thought of as resulting in a certain state of readiness to act. A perfectly "rested," "healthy," "well-fed" synapse, whatever this may be in terms of metabolic state, chemical composition, or electrical status, may be thought of as in a state of readiness to act providing its special position is one of close contact or adjacency. A fatigued synapse, or one that is imperfectly formed, on the other hand, is in a state of unreadiness. If the synapse conducts — in other words, if the synapse is in a state of readiness — it yields a response which is recognized as pleasant, whereas if the state is one of unreadiness, the response is recognized as unpleasant.

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[1] Gates, A. I.: *Psychology for Students of Education*, p. 230. The Macmillan Company, 1923.

Readiness. — What is the relation of this feeling tone to the habit or to conduct? It should at once be evident that habit is primary. Whether or not a given response is made depends in the first place on whether the connection is there. Conduct would seem to depend primarily on previous learning — on the existence of habits. A given situation is replete with competing stimuli to activity. One prime characteristic of our behavior is that activity is selective; it is a response to only a fraction of the total situation to which we are sensitive. Other things being equal (such as intensity of stimuli), that stimulus is selected for which the connection system is most ready. To respond when ready is satisfying or pleasant. In other words, this readiness, which is known introspectively only as feeling *after the reaction*, is the factor which determines choice in the face of competing stimuli. From this point of view, readiness is a prime determiner of conduct.

But what determines readiness? Here we must rely still less on what physiology can teach us and on common observation. In the first place, it is fairly evident that readiness depends on the existence of the habit or bond. If there is no possibility of the reaction, there can naturally be no such thing as readiness. Secondly, it is fairly evident that the state of rest or fatigue is a factor in causing the state of readiness. We are ready to do when rested what would be irksome when tired. Disease, neurasthenia, psychasthenia, and kindred metabolic conditions of the conduction system undoubtedly have their place in determining readiness or unreadiness. In the third place, the internal organic drives to action determine relative readiness and unreadiness. Those reactions which have shown themselves to be useful in alleviating an organic urge are placed in a state of readiness and those reactions which have shown themselves to be useless in alleviating an organic urge are placed in a state of unreadiness. Readiness is then, the net result in the neural mechanism of previous practice and habit formation.

The nature of readiness is vividly described by Kilpatrick. In the following quotation substitute "organic urge" for "set" to bring the terminology into harmony with that used in this book:

> "Readiness is easier to see than to tell. I like to think of it as connected with the degree of stimulation needed at any given time to bring about a given response. The greater the readiness, the less stimulation is needed. Imagine a small boy and a heartless experimenter. One hot day the boy begs for ice cream, boasting recklessly that he can eat six helpings. The experimenter dares him to do it, saying that he will furnish the ice cream. The contest is on. Situation: a plate of ice cream before a small boy on a hot day. Response: the boy falls with alacrity upon the cream. Readiness is high. The second helping finds, if possible, even greater readiness. But toward the end of the third plate readiness sharply declines. The fourth sees readiness reduced to the zero point and even below. Readiness is thus a condition of the neurone measuring the degree of its craving for activity."
>
> "That is clear so far, but are there not other causes of readiness or unreadiness?"
>
> "Indeed, yes. Fatigue, due to extended exercise, is a common cause of unreadiness. (The case above was different. It was not so much exercise of jaw or palate nerves as it was fullness of stomach that reduced below zero the readiness for ice cream.) Preoccupation with something else of an opposing kind may also bring unreadiness, as when fear or sorrow causes unreadiness for mirth. A most important source of readiness is set, one's mental attitude at the time."
>
> "I wish you would tell us about set. I have heard so much about set and purpose that I just must straighten them out. What is the connection between set and purpose? But first, what is the difference between set and readiness? They seem much alike to me."
>
> "They are much alike and sometimes confused, but I believe we can make a clear distinction between the two. Set is broader than readiness. Readiness is best thought of as belonging to one response bond (possibly a com-

pound response bond), while set refers to the mind acting more or less as a whole (or for our purposes, set more precisely belongs to an aggregate of bonds that for the time being have practical charge of the person or organism). The term 'mind-set-to-an-end' brings out perhaps more clearly what I mean. The emphasis here is one controlling end which seems to possess the mind. The organism is bent or set upon attaining this end (typically an external end). The practical relations between set and readiness are here most interesting. A boy gifted in baseball is anxious that his team shall win in the match next Saturday. We may say that he is 'set' on winning the match. This set reaches out to many allied and auxiliary response bonds and makes them *ready* for the part they may possibly play in attaining the end in view. The boy's ear will be 'wide open' to hear any useful 'dope' on the game. His eye will be 'peeled' to see the curves of the opposing pitcher. This effect is general, the mind-set-to-an-end in fact makes more ready all one's inner resources (response bonds) that by previous inner connection seem pertinent to the activity at hand. Nor is this all. Simultaneously with passing on readiness to pertinent bonds, this set also makes unready all those response bonds whose action might interfere with attaining the end in view. The same thing that made our baseball boy ready for the necessary practice during the preceding week made him correspondingly unready for anything that might interfere with that practice. Every teacher knows that little study is given to books just in advance of any engrossing contest. Some college teachers say no serious study is possible till after the Thanksgiving games.[1]

Our analysis has shown that the feelings are not so important as the readinesses or unreadinesses which determine the feelings in conjunction with the subsequent reaction. The readinesses and unreadinesses, probably characteristics of the conditions of the synapses, determine the selection of stimuli to which response will be made. The factor which seems to condition these readinesses and unreadinesses is the behavior chains in previous experience which satisfy or do not satisfy organic urges. In order to know the readinesses and unreadinesses in any situation one needs to know which responses have been satisfying in previous similar situations in the presence of the same urge. The feelings are nonconsequential by-products of the situation and may be disregarded.

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[1] KILPATRICK, W. H.: *Foundations of Method*, pp. 25, 26. The Macmillan Company, 1925.

All that is necessary in defining the conduct is to describe in detail the situation and the response. It is true that the various readinesses and unreadinesses are salient features of the experience, and are the factors in determining which aspects of the situation shall be responded to and what the nature of the response shall be. Readiness and unreadiness are included in habit. When we have defined the responses that are desired in various situations, we have also defined what readinesses we expect.

Readiness and unreadiness have to do with the strength of habits. Any specific habit may be thought of as varying in strength according to the amount of stimulation necessary to break it. The man who resolves on New Year's Day to stop smoking and then cannot resist buying a cigar at the next corner store cannot be said to have formed a very strong habit. Honesty in school work as a habit may vary in strength according to the amount of stimulation needed to break it, such as the teacher going out of the room, the opportunity of using a key, the sight of others in the room being dishonest, the value placed on getting high marks, etc.

"Feelings of value" as controls of conduct should be discounted. Habit is controlled by the outside situation, according to the results of past learning. Love of the truth and abhorrence of a falsehood are not what make us truthful; we are truthful because we have learned to respond truthfully in situations where truth is a factor. We love the truth because that is the way we were made to respond by previous learning. That we love truth because we are truthful is the law rather than that we are truthful because we love truth.

Attitude considered as an organic drive. — Attitude is used in psychological literature with at least seven different meanings. An attitude may be one of the great organic drives or one of their derivatives, which are known as purposes or motives. Used in this way attitude refers to some more or less permanent set or adjustment of the individual leading to some line of activity. We speak of a hungry or a sleepy attitude. Attitude with this meaning has been discussed in the previous chapter and nothing additional need be said here.

Attitude as muscular adjustment. — Attitude sometimes refers to muscular set or adjustment. The runner on his mark is a good example. The commands of the starter are "On your mark — get set — go!" At the first command the runners take their position, they crouch, they place their feet and hands. At the second command they rise, still on all fours, into a position of tenseness — all muscles are stiffened, and the eyes are set forward. Changes also take place in the circulatory, respiratory, glandular, and other systems. With a given organic urge these bodily and organic reactions are the first reactions that are made in attempting to alleviate or satisfy the urge. Because they are a kind of preliminary adjustment in which the organic probably predominates, they are often called attitudes.

Attitude as generalized conduct. — Attitude sometimes refers to generalized conduct, that is, to conduct in response to abstract and minute features common to many different situations. One speaks of a niggardly or extravagant attitude, or a careless or careful attitude. May and Hartshorne speak of a scale to measure attitude. They speak of attitude as the equivalent of behavior tendency but their scale measures dishonesty, particularly with reference to cheating in school situations. They say, "Assume that by the time a child reaches the fifth grade he has more or less permanent sets or attitudes toward cheating in school work. He may be set against it, or be in favor of it, or be neutral toward it."[1] These writers seem to be confusing two things. Their test is a test of performance, of actual response to situations where cheating is more or less easily accomplished. This conduct — dishonesty — that these investigators are interested in is more than a simple response to a narrowly defined situation; it is a response, more or less regular and uniform, to the dishonesty or cheating factor in several different situations. One interesting outcome of their work is the finding that conduct is not nearly so generalized as is commonly supposed.

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[1] May, M. A. and Hartshorne, H.: "First Steps toward a Scale for Measuring Attitudes," *Journal of Educational Psychology*, XVII: 145–162, March, 1926.

Attitude as set or readiness. — Although their test is a test of actual behavior, May and Hartshorne state that they are interested in set or readiness which is a *fourth* use of the term attitude. A complete analysis of what is meant by this use of attitude seems to trace it back to the metabolic state of all the neurones involved in responding in a certain situation. At a given moment, as a result of learning and the state of fatigue or rest, every neurone has a certain electrochemical state which defines its readiness to react under a given stimulus. This state of readiness is what is often referred to as attitude. But this readiness (excluding metabolic state due to rest or fatigue) is nothing except the net result of past learning, and exhibits itself under stimulation in a response which is described as a habit of more or less strength. In other words, attitude here refers to that static condition of the neurones which precedes and determines the nature of the dynamic response under stimulation. The static condition and the dynamic response are complementary and exhibit a perfect correlation. Our knowledge of the static condition or readiness or attitude can only be determined by noting the response under appropriate stimulation. These sets or readinesses or attitudes are also complementary to feelings of value which are so highly considered as being the foundations of character. Pleasant feelings result from the reaction of ready conduction units and vice versa. A child cannot be taught to like vegetables — he can be taught to eat vegetables and then he will like them.

Attitude as emotional response. — Attitudes are commonly supposed to involve emotional responses, which is our fifth meaning of the word attitude. Briggs discusses at length "emotionalized attitudes." He seems to have habits in mind when he speaks of emotionalized attitudes. For instance, he speaks of the attitude of neatness that results in a habit of cleaning up one's desk, or an attitude highly emotionalized toward doffing one's hat in an elevator in which ladies are riding, or a habit with little or no feeling about giving up one's seat to a lady standing in the subway. Whatever else these responses may be, they are at least outwardly habits, definite responses in certain situations. What goes on within the individual is less clearly understood. Even if we grant that there may be in some instances an emotional accompaniment, it is difficult to conceive how as emotions they direct behavior. As far as is known, emotions are correlated with certain visceral and glandular changes. These physiological changes are not specific determiners of action. The organic adjustment of itself seems to be of no consequence in determining conduct except as it makes it more impulsive, more forceful, and more energetic. Physiologists are inclined to the theory that the action of the sympathetic nervous system is all or none and that the specific character of an emotion is given by the particular muscular response or adjustment.

Attitude meaning feelings. — Perhaps in using the word emotion Briggs is referring to those feelings of pleasantness or unpleasantness which accompany all activity whether smooth and without opposition, or rough and accompanied by opposing tendencies to action. These feelings may be a sixth meaning attached to attitude. These feelings, however, are not reactions in themselves; they are merely qualities attending all our reactions. As stated previously they seem to be correlated with the previous state of readiness or unreadiness.

Attitude meaning verbal responses. — A seventh meaning of attitude refers to certain verbal responses of acceptance or rejection of an issue, as the answer to "What is your attitude toward prohibition?" It would seem that any issue of life may be verbalized in this way by a judgment of liking or disliking, acceptance or rejection. In this sense these attitudes are verbalizations of our various readinesses or unreadinesses. Such attitudes usually take the form of "I like this" or "I dislike that" or "I believe in this" or "I disbelieve in that."[1]

Attitude not a specific response. — From this analysis it is seen that there is much confusion in the use of the term attitude. There is no special set of neural conduction arcs especially reserved for attitudes. Attitude is a term which labels groups of habits already recognized in other connections, or it refers to certain aspects of these reactions. Insofar as attitude refers to the organic drives, to generalized behavior, to reactions of the sympathetic nervous system, or to certain verbal reactions indicating liking or disliking, it refers to definite habits and is not a peculiar type of reaction. Insofar as attitude refers to readiness or the feeling of value that precedes or accompanies reactions, it refers to certain aspects of phases of habits. The conclusion to which we are forced is that when educators set up as objectives certain attitudes of this or that, they are confusing the issue and causing themselves trouble. In some cases they have reference to the *formation of certain habits* which are expected to occur regularly and uniformly in the appropriate situation, such as honesty or cleanliness; or in other cases they refer merely to the verbal response which is learned. Wherever attitude refers to a specific habit, however generalized, the response may be precisely defined and the situations which are to condition this response may be definitely determined. In other cases, they have reference to the readiness which is the static condition of a habit, or to the feeling which is the accompaniment of responses. But these are merely features or aspects of reaction systems. They are not reactions themselves and hence cannot be the direct objective of education. But they are complementary and correlative to our reaction systems, and one may achieve the result desired by aiming at the formation of definite habits. Our general conclusion is that attitude is subsumed by habit and has no existence as a separate reaction.

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[1] Perhaps a more general description of this meaning given to attitude is to call it an *act of choice.* For instance, one may call it an expression of attitude when a child chooses one of two pictures as being better liked. Limiting this type of attitude to verbal response may be unnecessarily restrictive, but a verbal expression is a very common method of indicating choice, or preference, or belief.

This is a particularly important conclusion for education. One reads in books on educational method that the objectives of education are habits, skills, interests, attitudes, appreciations, etc., and recently special stress has been placed on attitudes as important but somewhat neglected objectives. The present point of view is that attitudes, not being reaction arcs in the nervous system, but only attributes of other connections cannot be learned directly at all. They are merely by-products of other learning. We like those things toward which we respond positively, and we dislike those things toward which we respond negatively. Attitudes in this sense have no place as objectives of education. There is nothing that we habitually do which we dislike, until fatigue sets in. Those cases wherein the schoolmaster says that he can do anything with the boy who likes him are not a matter of the definition of conduct, but a matter of method.

As a coda to this discussion let it be stated that whatever the intentions of educators in the matter of attitudes, the most direct and usually the only response that is inculcated in school is a verbal response. What can the school teach about attitude toward foreign peoples? It can teach that one ought to be tolerant, as a verbal response. But this verbal response is a quite different thing from the actual response that one makes when in the presence of and under the necessity of directly responding to a member of another race.

In themselves these verbal attitudes are relatively unimportant. It matters little whether a person claims to be conservative or progressive. The main thing is: does he act conservatively or progressively? One's professions of preferences are mere surface phenomena. But attitudes are valued because they do give a clue or indication of real underlying readiness or unreadiness. In this way they uncover underlying conduct trends which can be arrived at in no other way. They may be used as a prophecy of future action. This expression of readiness and unreadiness may be not only verbal, but may involve facial or bodily expression. A wry face will indicate aversion, and a smile will indicate acceptance more readily than words. Sometimes these bodily expressions of unreadiness become so intense that they arouse and are stimulated by the sympathetic division and crying, a flow of tears or other internal adjustments take place.

Many interesting problems arise from a consideration of these attitudes. Verbal expression does not necessarily truthfully portray inner facilitation or resistance. In cases of dissimulation one may really speak contrary to actual readiness. Boasting is an example; rationalization is another. A child may claim to be unafraid, for instance, of going on a boat or into a dark room but may balk at the actual act. Inexperienced persons, on this account, distrust those questionnaires which have recently been devised to measure a person's interests or attitudes with special reference to his progressiveness or conservativeness. The objection raised is that it is easy to state one's beliefs or interests one way or the other regardless of one's real interests or beliefs. The answers may be guided by one's opinion as to how other people will judge one by them. It happens, however, that in actual practice such dissimulation takes place only infrequently. One's natural (although probably learned) reaction is to make the verbal statement harmonious with the actual readiness or unreadiness. It would also seem that if a person is influenced by what other people say or think, he is usually influenced not only in his words but also in his internal readinesses and unreadinesses. Most persons have learned to make their words and thoughts match their actions. It is the exception for a teetotaler to say that he does not believe in prohibition. Most men who say they disbelieve in prohibition will suit action to the word on the proper occasion. A poll or straw ballot on a group's attitude toward prohibition is apt to give a pretty accurate picture not only of what the group professes but of their actual conduct. It is for this reason that these questionnaires designed to tap attitudes have proved themselves rather reliable and significant indicators of conduct trends.

Recent experimental data published by the Character Education Inquiry tend to substantiate the above statements. Quotation will only be made from the conclusions as stated by May and Hartshorne, as a description of their experimental technique would be somewhat involved:

> Over against the fact that 89% (of children) stated that it was their duty to read the Bible every day (apparently a conventional response) must be set the fact that very few of these children changed their answers when confronted with the answer sheet which showed that the "standard" did not regard it as their duty to do so. . . . We may say, on the one hand, that the moral knowledge scores, therefore, which differ widely from child to child, are not merely efforts to repeat the school standards, but represent something more fundamental. Or, on the other hand, we may say that the tendency to make a good appearance does not correlate with moral knowledge. . . . The consistency of results, as found by correlating comparable forms of the same test, indicates that what is stated as moral knowledge has a certain coherence and stability, and whether lived up to or not, points the way to action that is regarded as "proper." [1]

With reference to the relation of verbal attitude and conduct these authors say:

> Ninety-one per cent of those who say it is all right to let another pupil copy your work and hand it in as actually his own cheated themselves. One hundred per cent of those preferring to smash the slot machine to recover their lost nickel actually cheated on a test. Ninety-three per cent of those who thought it right for John to cheat in order to help his class win actually cheated themselves. It is noteworthy that these high agreements among the cheaters are in regard to cheating in two cases, to property in the third, and *not in any instance to other types of behavior*. This is somewhat surprising, since one would not expect a cheater to wear his heart on his sleeve.

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[1] Hartshorne, H. and May, M. A.: "Testing the Knowledge of Right and Wrong," *Religious Education*, February, 1926; April, 1926; August, 1926; December, 1926.

The present writer's own interpretation of the data given in the article would not be so strongly in favor of the position quoted. For example, there were many more pupils who said it was wrong to cheat and did cheat than who said it was right to cheat and did cheat. The numbers on which the percentages are based are very small. The zero correlation which these investigators found between moral knowledge and conduct proves nothing, except that both knowledge and conduct are very specific.

Importance of verbal attitudes in a democracy. — It was stated on page 230 that these verbal attitudes are relatively unimportant for conduct. But they do have an importance of their own which should not be belittled. In a democratic community, much of the common conduct — the carrying on of affairs and the transaction of public business — comes from the desires of the people. These desires are expressed verbally in discussion, arguments, speeches, and letters. Because these attitudes are verbal they are particularly open to the influence of school education. If there is one thing that the school ought to be able to accomplish with its predominant use of books, it is the formation of these verbal attitudes or ways of thinking. From the very first, children are taught to respect the authority of the school and its learning and they are particularly open to suggestion coming from the schoolroom.

When each house had its own well and pump and houses were widely separated, the question of water supply was an individual concern. Each householder did what he had always done or what he had been taught to do. But the water supply of a city — who is responsible for that? Of course there are certain individuals whose duty it is to regulate and attend to the proper maintenance of the water-supply system, but they do not authorize the maintenance of the system. That authorization is given in democratic communities by the representatives of the people; and in even the most badly run city government, the citizens determine in broad measure the conduct of city affairs. Each citizen contributes his quota, by nonopposition, if by nothing else, and certain individuals by the strength of their convictions and by their capacity to make public appeal wield great influence in molding this public opinion. On the surface, the most that an individual can (actually) do along this line is to cast his vote, but really his influence is far wider. Every man takes a more or less receptive or obstructive attitude toward every issue presented to his attention, and it is the sum total of such attitudes which constitutes public policy.

In getting a person to take a stand for a thing, the most fundamental factor is the need or desire for the thing. But before the need or desire arises, a bias can be given by getting the pupil to make a verbal reaction. A friend from South Africa told the author of the difficulty a village had in introducing a water system to bring water from the mountains — they had always used the water which passed in ditches through every street, and to the villager there was no need for change. Water running in pipes was thought to be impure because it was shut off from air and sunshine. But teach a child in the school of that village the need of a pipe water supply, and when the occasion arises at some future time for him to take sides he will already have the die cast. This previous verbal reaction in school will have biased him already. To be sure, if a strong need or desire conflicts with a previous verbal reaction the former may have the upper hand. The maker of pumps may strenuously object to a pipe system notwithstanding what he has been taught. But the average citizen who is disinterested in the matter may be depended upon to take the side with which custom or education has most deeply impressed him. So a presentation of civic facts and needs will have its direct effect in the civic conduct. As far as the direct influence on conduct goes, between knowledge of physiology or knowledge of sanitation and public health, the writer would unhesitatingly say that the latter would have by far the greater influence, for the former hopes to make a verbal reaction turn into some other motor reaction, while knowledge of sanitation relies for its effectiveness on the use of the precise verbal reaction formed. With this purpose in mind the following sentences from school readers in community hygiene and sanitation seem to be well adapted toward helping to create a favorable attitude:

> When we add the annoyance of the griming of buildings, the coating of sidewalks, the blackening of curtains, carpets, and clothing, and above all the obstacle this soot offers to keeping our windows open, it is clear why the smoke nuisance has been taken up so energetically by health officials.
>
> If the health officers and property owners will work together, they can rid any town, village, or summer colony of mosquitoes within two years. The town has to make up its mind that it will not permit mosquitoes, and persist in draining and kerosening until the pest is wiped out.

This information in community and social hygiene as well as occupational and school hygiene may well include the following topics: buildings, streets, parks, playgrounds, public baths, water supply, illumination, sewages, regulations of nuisances, street cleaning, garbage removal, hospitals, clinics, special institutions for atypical persons, hygiene education, boards of health, campaigns against certain diseases, control of food, milk and traffic regulation and fire protection, as well as certain more general topics concerning the social evil and school and occupational hygiene.

Dr. Winslow mentions seven foci for the information essential for the promotion of public health:

> 1. The expansion of everyday conceptions of cleanness, to include the vitally important sorts of cleanness can only be acquired through knowledge of the principles of bacteriology, best by actual demonstrations of cultures which the student can see and handle. Much of the inspirational health teaching of the present day shows that even the would-be teacher of hygiene has quite failed to grasp the essential distinction between dirt which is dangerous and dirt which is merely unsightly.
>
> 2. In the second place, the distinction between the harmful and the harmless bacteria should be made clear, with the fact that the dangerous types have their origin only in the human and the animal body; so that a vague fear of dirt and disease in the abstract may be replaced by an intelli-

gent sanitary conscience which will facilitate the isolation of disease in its early stages.

3. Thirdly, the pupil should be given a conception of the way in which disease germs are transferred from one person to another by water and other articles of food and particularly by insects; and of the methods of preventing such transfer by measures of public sanitation. The control of the fly nuisance offers a peculiarly valuable direct contact with personal experience in this field.

4. Next in importance is a comprehension of the nature of the struggle between the invading microbe and the human host with an intelligent grasp of the principles of vaccine and serum therapy, which promise to play an ever-increasing rôle in the control of communicable disease. With instruction of this sort the obstructive efforts of the anti-vaccinationist would lose their power and smallpox, typhoid and diphtheria could be brought under complete control.

5. In the higher grades the principles involved in the control of tuberculosis and infant mortality should find a place. In these and other fields an intelligent co-operation of the citizen is vital to success and that co-operation can only be secured in a community where the elementary principles involved are understood.

6. If the citizen is to play his part in the broader community struggle against preventable disease he should understand something of the main objectives and the general activities of the health departments of city, state, and nation. The health officer who operates in a community where any substantial proportion of the citizens have received a basic instruction of this kind would be able to accomplish results in the saving of lives of which we have scarcely dreamed in the philosophy of the past.

7. Finally, we should recognize a growing and a very sound tendency to introduce into the school curriculum well planned instruction in regard to safety in the street and in the home. One-half of the victims of automobile accidents are children, of whom over 500 are killed and 12,000 injured in New York City every year. The schools of St. Louis reduced fatal accidents of school children by more than 60 per cent. through intensive safety teaching. The Safety Institute of America is planning to furnish a special information service for the teachers of the city along this line next year.[1]

We may feel somewhat sure that if we teach a boy in school the reasons for taking out life insurance, he will in later life sponsor the cause of life insurance in a discussion in any place where a verbal choice is made, even though he has made no move to take out insurance himself. Insofar as conditions are to be socially regulated, the citizen should be biased toward the rational course. Such topics as the threatened extinction of bird and animal life, regulations of traffic, bank, and insurance company regulation, and others may well be included in the school curriculum to set the bias of the upgrowing generation toward attitudes which are today accepted by thinking people.

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[1] Winslow, C. E. A.: "The Objectives and Content of Formal Instruction on Hygiene," in the *Report of Conference on Health Education and the Preparation of Teachers at Lake Mohonk, 1922*, pp. 28, 29. The United States Bureau of Education and the Child Health Organization.

Important social issues. — What are the attitudes that should be inculcated in the young?

An investigation conducted by Mr. Baldwin Lee has as its purpose the determination of the major issues. These issues may be used as a ballot to study the attitudes of a community or groups, or they may be made the basis of education in open-mindedness. Mr. Lee has permitted me to append here a list of the most frequent issues which he finds in an investigation of fifteen social science textbooks:

A Rank Order List of the Most Important Twenty-Five Social Issues as Determined by an Analysis of Fifteen Widely Used Civics Textbooks — With the Number of Books in Which Each Is Recognized as an Issue.

1.	Should municipal utilities be owned and operated by the city?	13
2.	Should the initiative and the referendum be adopted as means of direct legislation?	12
3.	Should the direct primary method of nomination be used in general elections?	12
4.	Should there be government ownership and operation of railroads?	12
5.	Should "home rule" be granted to cities and counties in the United States?	11
6.	Should the principles advocated by the "short ballot" movement be favored?	11
7.	Should the United States adopt a policy of free trade?	10
8.	Should there be an educational qualification for voting?	10
9.	Should the commission form of government be approved for cities?	10

10.	Should members of the President's Cabinet have seats in Congress?	9
11.	Should capital punishment be abolished?	8
12.	Should the presidential term be lengthened with no privilege of re-election?	8
13.	Should independence be granted to the Philippine Islands?	8
14.	Should a federal department of education be created with a secretary in the Cabinet?	8
15.	Should presidential candidates be nominated by presidential preference primaries?	7
16.	Should elective officials be subject to recall by the voters before their terms have expired?	7
17.	Should the city manager form of government be approved for cities?	7
18.	Should a newly elected Congress be required to assemble shortly after its election instead of about thirteen months thereafter, as at present?	7
19.	Should aliens who have declared their intention of becoming citizens be permitted to vote?	7
20.	Should immigration into the United States be further restricted?	6
21.	Should the scheme of proportional representation be adopted?	6
22.	Should a unanimous decision be necessary for a conviction in a jury trial?	6
23.	Should judges be selected by popular vote?	6
24.	Should compulsory arbitration of industrial difficulties be favored?	6
25.	Should labor be permitted the right to strike?	6

Summary. — Likes and dislikes are claimed by some to be the determinants of conduct. But feelings do not constitute a separate reaction system. Evidence for this is: (1) that they are not experienced in isolation; (2) they are aspects of the original response to an object; (3) they do not have specific sensory endings or organs of reaction; (4) they are mutually exclusive. Affective states depend on the metabolic conditions of the synapse for: (1) fatigue states are highly tinged with unpleasantness; (2) feelings are rhythmic in character; (3) the intensity varies intermittently; (4) pleasantness and unpleasantness do not occur simultaneously; (5) feelings are factors in learning. Feelings are complementary to readiness. Readiness depends on: (1) state of rest or fatigue, (2) organic drives, (3) habit. Feelings and readiness are subsumed in habit and may be dispensed with, in defining conduct. Habit is sufficient.

Attitude is used in psychological literature with at least seven denotations: (1) drive, (2) muscular adjustment, (3) generalized conduct, (4) readiness, (5) emotional response, (6) feelings, (7) verbal response. Attitude is not a specific response — it either is included in habits already recognized such as verbal response, or refers to aspects of these reactions. Verbal attitudes cannot take the place of actual performance although they often give a clue to underlying conduct trends. Verbal attitudes are of special value in a democracy.

CHAPTER XII

THE PLACE OF SYMBOLS IN CONDUCT

Value of symbols in objectifying the situation — Symbols become sacred — Claims for the symbols of Christianity — Efficacy of Christian symbolism not unique — Scientific religion — Dangers in the use of symbols for conduct control — Summary.

Value of symbols in objectifying the situation. — Confacts require high powers of abstraction and generalization. Even though a confact may be developed without the formation of a concept, every confact requires a high degree of sensitivity to the minute, abstract, intangible features and elements of the environment. The ability to respond to such tenuous environmental elements is easy for some persons and difficult for others. Probably general intelligence plays a part here. Because of the difficulty of recognizing these evanescent stimuli, society has protected itself by building an elaborate system of symbols which may serve as substitute stimuli for the more obscure elements they represent. Indeed religion, which serves as the protector and conservator of the confacts, bases much of its authority on an elaborate system of symbolism. Many symbols are actual concrete objects. The flag and the cross are examples. The flag is the symbol which society uses to conserve the confact of patriotism. What a useless thing is a flag! It is merely a piece of cloth. It may not be used as clothing or as a decoration. Yet children are taught to salute it and respect it. It is associated wherever possible with our history, particularly the history of our wars, with the army and navy, with military parades, with the President, with holidays, and with national honor. Under this battery of associations it comes to stand for the country, particularly in its aggressive and protective aspects. A nation is a highly abstract affair. The ordinary individual, living a normal, peaceful, industrious life without travel, finds it almost impossible to conceptualize the nation. The flag is a symbol which helps to conceptualize the nation. It makes it easier for citizens to respond to the nation than it would be if the nation had no such objective symbol. The nation holds this symbol in reserve for times of emergency and danger when it wishes real overt responses. In the meantime the nation is content if most persons respond to the flag by formal salutes, respectful stares, and the visceral responses which we term emotional. This visceral or emotional response in itself tends to heighten the overt response which may at any time be called upon.

All in all, there are a host of such material symbols. There are the great natural phenomena such as the sun, moon, stars, earth, rain, thunder, wind, and ocean; the minor natural objects such as rocks, rivers, trees, wells, springs, and animals of all kinds; and lastly creations of man such as idols, statues, works of art, keys, rings, paths, gates, doors, bells, weapons, cities, pictures, wine, bread, candles, crosses, clothing, kings and kingdoms, and so on even to complicated machinery. Besides these material symbols there are symbols which are verbal and imaginative only. Religion has been replete with this sort of symbolism, as God, the devil, angels, wind, the dove, and tongues of fire to represent the Holy Spirit, heaven and hell, the sanctuary of heaven, etc. Certain acts also have symbolic value such as handshaking, kissing, taking a pledge, kneeling, bowing, lifting the hat, and drinking anyone's health. All of these help to objectify and make concrete what would otherwise be obscure and apt to be neglected.

One might think from the foregoing description that symbols are consciously planned and guarded by society for the protection of its confacts. As a matter of fact, most of the symbolic stimuli of today were realities of yesterday. In many cases, they are mere vestiges of the old religious or civic ceremonials or duties. In primitive religions, for instance, nature-worship was not a symbolical worship, but a worship of the thing itself. Originally the sun was not worshipped as a symbol of all that is light, warmth, and growth, but as a god in itself, or as containing a spirit which was a god. The stones of early religions were not idols — they were not images of the god but the god himself, or at least that in which the divine spirit dwells, or that with which it associates itself for the purposes of worship. The uncultured Greeks whipped the idol Pan with squills if food was scarce and bound the image of Aphrodite with cords to prevent its running away. Renan tells of a Breton smith who threatened the Saint's image with red-hot pincers to compel him to heal his son. Many customs which today we hold as symbolical were once used as natural rites and ceremonials. Our seasonal festivals like Christmas, May-day, and Easter; our institutions for marriage and funerals so filled with symbolism; our acts of friendship like hand-shaking, hat-lifting, kissing, all had their origin as meaningful and necessary acts. Today these acts of custom are charged with symbolic meaning.

When one notes the value of the symbol as a means of objectifying tenuous elements of the environment and consequently evoking desired responses through the process of conditioning, one sees that society has here a potent and powerful conduct control. Without the symbol one must depend on the chance recognition of or response to such things as property, honor, chivalry, dirt, and order. But by means of a symbol the appropriate act can be more surely conditioned to follow in the desired situation.

Symbols become sacred. — But as is so often the case, the means may become the end. The symbol, which is only a symbol of more tenuous environmental factors, may come sooner or later to be valued for its own sake. The flag, for instance, comes to have a peculiar sacredness of its own. There is an etiquette, a code of rules for handling the flag. It must never be allowed to touch the ground; it must not stay on the flagpole after sunset; one must salute or remove the hat as it passes in parade. An infraction of one of these rules becomes an offense of itself. When the flag is ill-treated by a foreigner the act is interpreted as a symptom of hostility; when a flag regulation is violated by a citizen, many are quick to see a symptom of disloyalty.

Probably the most outstanding illustration of this tendency to value the symbol for its own sake is organized religion. In many cases what was originally an actual experience or situation later becomes a ritual or ceremonial, grows to be symbolic, and eventually is valued for its own sake without symbolic reference. An intense sacredness, tending to exalt the symbol far above its real worth, attaches to it and results in our associating sacredness with religion.

Claims for the symbols of Christianity. — Christianity asserts itself as an exclusive power for forming the highest character. It is maintained that the "Christian spirit" is the *sine qua non* of perfect character; that the devotion, the earnestness, the seriousness of the zealous Christian can be obtained in no other way than by the inculcation of this Christian spirit. Conversion makes the "new man," one marked by a purpose far transcending any obtained by less compelling causes. The present movement of religious education for Christian character has as its underlying motive precisely this. It is assumed that no purely secular education can form the highest character; that a Christian education is necessary for the purpose. With this much claimed it is impossible to stop here. Where the leaders of the movement emphasize the foregoing points, workers are making it evident that the tools on which they rely in this Christian education are a set of symbols, differing with various denominations and sets of men. There are the symbols of Deity, the Bible, the Church, the Sabbath and a whole mass of Semitic history, geography, folklore, customs and beliefs, together with certain beliefs about a world of spirits, a future life, etc. To carry the point further, certain evangelical sects have an edifice of symbolic beliefs including minute descriptions of a coming judgment day which will involve the second advent of Christ.

There is a tremendous popular faith among most people that some sort of symbolism, perhaps not the extreme kind last described, but at any rate of the Deity, the Bible, or the Church, is necessary for the control and restraint of the mass of men. It is fearsome awe of and respect for these overwhelming entities, so these people say, that is the bulwark of civilization, that restrains the bestial passions, that renders order to society. The following testimony given during a recent libel trial in Honolulu illustrates the point:

> "John, do you believe in God?" the Judge asked.
>
> "I do," Kahuena replied.
>
> "Are you a religious man?"
>
> "Yes."
>
> "Do you believe that God punishes those who sin?"
>
> "I do."
>
> "Do you believe that lying in court is sin and that God will punish you for it?"
>
> "I do."
>
> "Do you think that God will forgive you for the lie you told in the trial in this courtroom?"
>
> "Yes, I think he has forgiven me."
>
> "If you tell another lie do you think God will forgive that also?"
>
> "I am not telling a lie. This is the actual truth."

The judge used the faith that most men are controlled in their normal acts by certain beliefs during their guarded moments. Undoubtedly he was right in the case of the individual whom he was interrogating. But it is asserted that these concepts are an essential part of character formation.

The daily press is filled with allusions to this popular superstition. There is a constant and intense pressure to have religion introduced into the public-school curriculum. Usually this pressure is from persons with wholly worthy motives who are endeavoring by such measures to exalt character education. Literature is full of references to this point of view. I quote from Tolstoi's *Anna Karenina:*

In order to marry, Levin had to procure a certificate of confession. During the course of the confession in which Levin admitted himself an agnostic the priest said: "You are about to enter into the state of matrimony and God may reward you with children. How will you be able to educate them if you do not vanquish within you the temptation of the devil, who is dragging you towards unbelief?" Some pages further on, Levin, having probably forgotten the trying circumstances of the confession, is engaged in a conversation with Lvov. Levin remarks: "But moral education is the most difficult thing of all. You no sooner conquer one difficulty than another crops up. It is nothing but a constant struggle. Were it not for religion no father would be able to bring up his children by his own unaided strength."

Another quotation is from that classic of American materialism, *Babbitt* by Sinclair Lewis. Babbitt grows enthusiastic in a campaign to increase the enrollment in his Sunday School. In studying the problem he becomes acquainted with the literature which is published to promote or boost "Sunday Schools." "He found many lucrative tips on 'Focusing Appeals,' 'Scouting for New Members,' and 'Getting Prospects to Sign up with the Sunday School.' He particularly liked the word 'prospects,' and he was moved by the rubric: 'The moral springs of the community's life lie deep in its Sunday Schools — its schools of religious instruction and inspiration. Neglect now means loss of vigor and moral power in years to come. . . Facts like the above followed by a straight-arm appeal, will reach folks who can never be laughed or jollied into doing their part.' Babbitt admitted, 'That's so. I used to skin out of the ole Sunday School at Catawba every chance I got, but same time, I wouldn't be where I am today, maybe, if it hadn't been for its training in — in moral power. And all about the Bible. Great literature. Have to read it again, one of these days.' "[1]

Fear is not always the motive appealed to. A mother will endeavor to influence her son's conduct by saying that God loves those who do His will. Many church members undoubtedly continue their faith that they are sharing God's love by doing their duty as they know it.

All this is a mixture of good and bad psychology. The good psychology is that these symbols are without doubt powerful stimuli to action. In the process of association these symbols come to have the same effect that actual people and things have had originally. In the lower religions, statues and sacred objects make these symbols sensory stimuli. In the higher religions mental or verbal symbols serve this purpose. Just as people are the most powerful stimuli to conduct, so the religious leader becomes the paramount symbolic stimulus. Jesus has lived and is today the revered deity of multitudes because of this. Fear of God was a control of conduct in the first illustration above, and love of God, almost to the point of eroticism, is the control of conduct for the pious Methodist.

Efficacy of Christian symbolism not unique. — But the bad psychology is the belief that any one system of symbolism is the essential control of conduct. Any person or object, or any element of these, may become, through a process of learning, a control or stimulus of conduct. The little children who are taught health by the Child Health Organization respond to Cho-Cho; the boy who "is good as he can be," "just before Christmas" responds to Santa Claus precisely as his elders respond to Christian symbols. Christianity has no option on the conduct controlling symbolism. The assertion of the religious-education movement that secular education of character cannot but fail must be denied. Secular education has a great deal to achieve when it sets out to accomplish what has been accomplished by Christianity in the production of good men. The Christian ideal is a high standard. But the fear that social stability depends on any one set of symbols is unfounded. Symbols are not necessary at all, though they are effective when used.

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[1] Lewis, Sinclair: *Babbitt*, p. 210. Harcourt, Brace and Company, 1922.

In this age when religion is being questioned and suspected insofar as its teachings are out of accord with those of science, we must be careful not to throw away too much. Without a doubt the symbolism of religion in the past has been a moral force in guiding the conduct of people to follow the great confacts. Without a doubt the majority of people require objectification or personification of stimuli before they can respond adequately to confacts. And if numbers of people are in danger of losing their religious beliefs, let us seek to provide some substitute symbols to take the place of the religious symbols.

Scientific religion. — The writer is not advocating a new religion. But he believes that were the problem directly faced, a new set of symbols could be derived that would better care for our confacts than the present religious symbols do. This might be called a Scientific Religion. First there should be set up a list of the confacts which society conceives to be most desirable and valuable. For each such confact a symbol would be established. This symbol should have objective form for the benefit of those who need the most objective form of appeal. It should also have its verbal correlate for those who may be controlled by verbal stimuli. These symbols, once accepted, could be given sanction by society. By being nonsectarian, nonpolitical, nonnational, they could win the approval of all groups. With this universal sanction they could gather as much if not more sacredness than the great religious symbols, national flags, and the like. Some such set of universal symbols for the control of confacts could be made a basis for moral education.

Such a set of symbols would be a great advantage over our present religious symbols. The latter have simply grown up, and like most things that have evolved they are imperfectly adapted to the present situation. Most religious symbols have only indirect reference to special confacts. Rather, they are directed toward increasing one's willingness or attitude to obey the great confacts, verbal teaching being depended on to make the specific application. As was seen in the previous chapter one cannot divorce attitude and behavior, for attitude (as preliminary set or adjustment of the neurone synapses) is merely an aspect of the whole behavior process. Symbols would gain manifoldly in value and effectiveness if directed toward specific applications in conduct. The great religions have their symbols, usually a person, but these symbols have merely evolved as such, which means that they have satisfied in a trial-and-error way the outstanding needs of society at the time of their development. Manifestly much more could reasonably be expected from a planned set of symbols consciously designed for a specific purpose.

The symbols for freemasonry come a little closer than those in religion to what the writer has in mind. To be sure the symbols of freemasonry are an inheritance from the past and have to be re-interpreted for each generation. The twenty-four-inch gauge is said to symbolize time, particularly time well spent. The common gavel symbolizes the enlightening and ennobling effects of training and education in all its various branches. The chisel represents advanced studies and training which give polish and refinement and fit one for the highest stations in life. The key represents the tongue — always ready to speak in a brother's defense. Solomon's Temple symbolizes the perfect character. The gloves symbolize purity of life and rectitude of conduct. The square symbolizes fair and honest dealings; that is, morality in a narrow sense. The level represents equality, which today must be interpreted as the just reward of a man's genius and industry. The plumb symbolizes uprightness of life. The compasses symbolize the heavenly, spiritual, or divine in man. These applications are more specific than the usual religious symbols, yet at the same time they lack the precise reference to definite confacts. They tend to have a mystery about them. Symbols planned to serve as controls of conduct need to have specific reference to the confacts which they represent. They need to have a definite denotation so that there is no doubt as to their reference and may be universally accepted.

Dangers in the use of symbols for conduct control. — Such a use of symbols to act as controls of conduct in the development of confacts is attended by certain dangers which may be powerful enough to prevent their effective use.

There is always a possibility that the wrong response to a symbol will be learned. Perhaps the greatest danger lies in a response of reverence or worship of the symbol. In the past symbols have acquired a sanctity and a holiness, which has overshadowed their real significance. This very thing has happened to words as symbols, so that much of formal education is a response to words, definition and form, with little or no reference to their significance in the conduct of the affairs of life. The symbols of religion have acquired these responses of reverence and worship to a superlative degree. It is a commonplace that the symbols of religion are responded to merely on Sunday and are quite unimportant on the other days of the week.

A second danger is that there is the possibility that the confact would work only when the symbol is in sight or in mind. If a symbol for honesty should be established such that any property having this symbol would be inviolate and every store and house having this symbol would be safe from robbery, then safety would depend on the display of the symbol. If a store failed to display the symbol it would stand as an open invitation to theft. In other words, a symbol cannot have the universality that one expects of a confact. What is gained in definiteness of stimulus is lost in universality. While for some persons of low ability symbols would help to link up situations having features in common, for persons of high ability symbols would surely retard the formation of delicate distinctions between situations.

A third danger that would result from the use of symbols in the formation of confacts is that they would tend to objectify and solidify conduct. Symbols would be pounced upon by those in power to maintain the *status quo*. The French Revolution would never have taken place if the people could have been kept in their ruts of habit. As it was the people suffered an intolerable situation for an undue length of time. If the privacy of property could be made even more sacred than it is today, much injustice might result before popular demand could remedy the situation. In other words there is always a danger that a confact may become unjust, intolerable, a burden. An increase of crime against property may represent a laxness in the morals of society, but it may also indicate the presence of a sore spot urgently requiring relief. It may indicate intolerable poverty, or living conditions which make impossible a satisfactory home life. In any event every confact should have its safety valve in order that maladjustments may be exposed. There is a real danger in making confacts so strong that a sick society in search of relief could not express itself.

Summary. — Society has found that conduct in response to tenuous and obscure elements in the environment is difficult to obtain from persons who are of average or low intelligence. Such persons do not form general concepts readily and in like manner they do not form confacts readily. One solution of this is to set up symbols which may emphasize and make concrete and objective the situations in which the confact is expected, these symbols to act as cues of conduct in place of more tenuous and obscure stimuli. Religions have done this and in many instances have constructed an elaborate symbolism. But this symbolism has been the result of slow evolution. The problem of conduct control has not been carefully and clearly analyzed. There is a need for a carefully worked out set of symbols which definitely apply to the great confacts to be used as controls of conduct.

CHAPTER XIII

PATHOLOGICAL CONDUCT

Conduct as described by the "new psychology" — The strain of civilization — Thwarted drives as bases for pathological conduct — Animal behavior in baffling situations — Activity sponsored by urge — Activity thwarted by situation — Obstruction in physical environment — Obstruction in social environment — Conflict of urges — Multiple response — Varieties of pathological conduct show two dominating principles — Defense-escape mechanisms — Neurotic behavior — Substitute mechanisms — Verbal expression of defense-escape mechanisms — Verbal substitution responses — Rationalization — Reasoning *vs.* emergency reactions — Summary.

Conduct as described by the "new psychology." — The psycho-analytic school pictures character as the resultant of various inhibitions, complexes, and suppressed fears and wishes which tend to switch the individual into various channels of conduct. This school owes its inception to Sigmund Freud, a German physician, whose approach to the problems of conduct was from his contact with ailing persons who came to him for treatment. Through his searching analysis of the events leading up to the crisis in his patients' previous history, his novel methods of inducing his patients to recall and divulge their personal experiences, and his keen insight into motives, Freud became the author and originator of the psycho-analytic school — the "new psychology." As Freud gained his insight into the problems of conduct by studying abnormal conduct, so the whole analytic school approaches the problem of character through abnormal, unreasonable conduct. The conduct they are interested in is the conduct of lapses, errors, mistakes, obsessions, and idiosyncracies.

Normal behavior is interpreted in the light of abnormal behavior.

Recent writers have seized upon Freud's principles and have elaborated them into a system of characterology. As these writers would view the matter, the description of conduct given in this book is entirely too simple. Conduct is more than mere reaction to stimuli, they would say. Character, likewise, is more than the arithmetical summation of habits; it is an intricate series of psychic forces.

The strain of civilization. — Others who are not technically versed in the intricacies of psycho-analysis may also, like these Freudians, venture a protest at the foregoing description of conduct. Their argument would probably be framed in this manner: Conduct as described here presents an impossible existence. No person is so constituted that he can stand up against the terrific burden of habit imposed in the previous descriptions. To submit to such a layer of artificial habit is contrary to human nature. It must not be forgotten that we are first of all creatures of impulse, instinct, and emotion. The great fundamental desires must be satisfied first; then if there is any energy left it may be directed to the acquisition of civilized ways. Children are notoriously savages. Imposing upon them the array of habits and "confacts" that has been described would be overwhelming and disastrous — human nature could not stand it.

The author's first reply to this latter point of view is to admit partly the truth in it and then to deny his responsibility for considering it here by saying that it is a matter of *method* and not of *material*. We are here simply concerned with describing conduct, particularly desirable conduct. We are interested in *what*, not *how*. How those habits are formed and how they may be organized constitute another problem.

The psycho-analysts have raised important questions and have given widely accepted answers to these questions. How can their point of view be assimilated and adjusted to the behavioristic point of view of this book? [1]

Thwarted drives as bases for pathological conduct. — Pathological conduct seems to *originate* in *thwarted drives.* In Chapter X the great organic drives of the body were discussed. There it was stated that these organic drives, being cyclical in nature, had an insistence that could not be brooked. Much, if not all, of behavior was a search for a means of alleviating the internal organic stimuli. But man is not endowed with ready-made solutions to all of the baffling situations in which he finds himself. Some few solutions he is born with, such as throwing out the hands when falling, or removing a fly by moving and twitching the skin. Some are learned by a trial-and-error process; some are taught by our teachers; some are reasoned out and solved as problems. But oftentimes our intelligence is not sufficient to cope with our problems and a situation becomes baffling. Conduct which consists of repeated and persistent endeavors to satisfy, but does not satisfy an internal drive we may call pathological conduct. Such a definition sounds all-inclusive. We do know that pathological conduct *may* originate in this manner and that much pathological conduct *does* originate in this way. We are not ready to say that all pathological conduct is of this type. Much of it undoubtedly has its origin in disease. One psychiatrist ascribes about 50 per cent of pathological conduct to disease, and about 50 per cent to a functional origin. Most pathological conduct is probably a combination of these two factors. Organic disturbances may render a person more susceptible to make inadequate responses. However, in the rest of this chapter pathological conduct will refer to thwarted conduct in the functional sense above described.

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[1] At the present time two groups of persons who are interested in conduct — the mental hygienists and the character educationists — approach the problem of the guidance of conduct from these two points of view. The character educationists usually are equipped in pedagogical and sociological theory and are primarily interested in fitting the individual for his place in society. The mental hygienists are equipped for the most part with a medical training and approach the problem from the clinical and remedial point of view. Neither group seems to understand very well what the other group is trying to do. The character educationists as a group are weak in their understanding of individual psychology, whereas the mental hygienists frequently are ignorant of the aims of education in fitting the child for his place in society.

Animal behavior in baffling situations. — Observations have been made on animals placed in unusual situations and the resulting "conduct" has been noted. This conduct has all of the earmarks in a rudimentary way of human conduct in baffling circumstances. Thorndike, who made the first objective studies of animal behavior, gives a good description of the behavior of cats under confinement. The cats used in the experiments were hungry when experimented upon. Thorndike calls their condition one of "utter hunger" and adds that he attempted to have the hunger motive of as nearly equal strength as possible throughout the experiment. The cats were confined in boxes of various descriptions which could be opened and from which freedom could be gained by pulling a string or loop or turning a wooden button:

> When put into the box the cat would show evident signs of discomfort and of an impulse to escape from confinement. It tries to squeeze through any opening; it claws and bites at the bars or wire; it thrusts its paws out through any opening and claws at everything it reaches; it continues its efforts when it strikes anything loose and shaky; it may claw at things within the box. It does not pay very much attention to the food outside, but seems simply to strive instinctively to escape from confinement. The vigor with which it struggles is extraordinary. For eight or ten minutes it will claw and bite and squeeze incessantly. With an old cat and another uncommonly sluggish cat the behavior was different. They did not struggle vigorously or continually. On some occasions they did not even struggle at all. It was, therefore, necessary to let them out of the box a few times, feeding them each time. After they thus associate climbing out of the box with getting food, they will try to get out whenever put in. They do not, even then, struggle so vigorously or get so excited as the rest.[1]

Activity sponsored by urge. — This description is most suggestive for enlightenment as to human conduct. In the first place note that activity is sponsored by a definite urge. In animal experiments, hunger is the urge usually employed. In human affairs there are several urges which may be the fundamental drive causing pathological conduct. The Freudians have asserted that all pathological conduct has its origin in the sex urge. But the experience during the war with war neuroses taught that there may be other urges that can cause pathological conduct.

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[1] Thorndike, E. L.: *Animal Intelligence*, p. 35. The Macmillan Company, 1911.

Situation thwarts activity. — We note secondly that the animal was in a cage where it could not reach the food which was in sight. None of the prowling, scratching, struggling, or growling yielded satisfaction to the hunger pangs. The animal was in a situation of suspense. The present condition was one of internal irritation (hunger) and nothing that the animal at first could do would relieve the irritation. In the case of human existence the situation of the puzzle box takes many different forms, and our more elaborate mechanisms, particularly our possibility of verbalization and our greater power of adaptation, make the problem much more complicated than the animal puzzle-box situation. In general the situations which may cause pathological conduct are of three types.

Obstruction in physical environment. — There may be an actual obstruction in the environment to prevent the fulfilment of desire. The youth may be employed at work which is monotonous and confining. The wife may be forced to do monotonous housework when other activities are more alluring. In such connections it is not always the absolute difficulty or monotony of the task but its difficulty or monotony relative to the tasks of neighbors or friends. Physical disfigurements or disabilities may serve as obstacles. The man who is short in stature, or has a disfigured face or a limp carries with him an obstacle to success which depends on the favorable reaction of other people.

Obstruction in social environment. — A second type of obstacle consists of the acquired habits and ideals, and the taboos and conventions imposed by society. Many of the stories of nervous ailments of women may be traced back to the restrictions and taboos which the marriage state places on womankind. There are individual differences in our dominant urges as in other human functions and some women find that their mates do not supply them with the satisfactions that they crave. But they are closely bound in their line of action by the trammels of convention. These social regulations form such a tremendous barrier in society that transgression brings a shame worse than the gnawing condition of the original craving. The system of habit described in Chapter V and of confacts described in Chapter VIII would constitute an unalterable barrier to many persons. These habits and confacts have been found by society to be most valuable for individual health and well-being and for social harmony and intercourse; but they often may run counter to momentarily strong passions and urges. So the system of conduct already described in this book as being desirable may prove in the cases of persons with strong impulses to be irksome and constricting, and where society has put up strong barriers against transgression there is sure to develop a cat-in-the-box situation.

Conflict of urges. — The third type of situation which imposes an obstacle to dominant urges is one where two urges conflict. Life is full of difficult situations where urges get in one another's way. Hamilton describes an undesirable home life which the wife wished to end by divorce.[1] Opposed to this impulse was the desire to protect and support her two children which she could not do were she to break up the home. These two impulses led in opposite directions and one could not be gratified without failing to gratify the other. Again desire for success may lead us to strenuous endeavor when our body cries for rest. These three types of restraint or restriction which prevent our satisfying our cravings are various manifestations of the situation of which the "hungry cat in the box" is a type.

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[1] Hamilton, G. V.: *An Introduction to Objective Psycho-pathology*, p. 264. C. V. Mosby Company, St. Louis, 1925.

Multiple response. — The cat in the box made such reactions as its original and learned equipment would permit. These reactions were limited in scope and in number to scratching, clawing, pushing, etc. In the case of baffled human behavior, the possibilities are much greater because of man's greater variety of reaction and greater possibility of adaptation. The typically human reaction and the one most likely to result in satisfaction is one which first involves the cortical neurones and the language reactions, and then, after deliberation, issues in conduct. But the reaction may not be of this highest type. It may involve the impulsive and reflexive kind of response. Most baffled conduct is of the latter category. These reactions are usually of the rudimentary type that is reinforced by the action of the sympathetic nervous system. In other words they are what are popularly called emotional reactions, but we shall call them "emergency reactions" because they are those reactions which call for emotional reinforcement. Naturally they are not the result of deliberation. Another characteristic of baffled conduct is that it may result in selectivity of response, *i.e.*, ignoring and neglecting to respond to certain stimuli which have definitely failed in past experience to lead to the satisfaction of the urge. The exact nature of inhibition and selectivity of response is not known, but it seems to be linked up in some way with the metabolism of the synapse which we have already discussed under the heading of readiness.

Varieties of pathological conduct show two dominating principles. — This whole field is so little known that it surely is not wise to dogmatize about it. But at present it would seem as if all pathological behavior could be explained by means of these two principles: (1) In baffling situations there is a tendency to make an "emergency reaction." (2) In baffling situations there is a tendency toward selectivity of response, thus making the subject more sensitive to certain stimuli, reaction to which promises success, and less sensitive to other stimuli, reaction to which promises failure.

Let us look at some of the traditional formulations of pathological conduct to see whether or not they come under the two principles above set forth. Following is a case of a defense-escape mechanism.

Defense-escape mechanisms. — A young lady went to work in the bookkeeping department of a publishing house. Over her was a lady whose authority she resisted, and yet the nature of her position made it imperative that she yield. Conditions grew more and more intolerable until at last she was suddenly taken ill with "a nervous collapse" or "nervous prostration." She was unable to get up from bed and had to have the daily attendance of a physician as well as a nurse. Her food had to be of the choicest steak or chicken and malt. For four or five months she was in this crippled condition. During this time her appetite was good and her cheeks were rosy. In later years she was unable to do housework. Although able to go out and take long walks, the simplest household task fatigued her so that she had to lie down. She had nervous sick headaches, although these headaches would disappear if there was an opportunity to go to ride. Later in life she married a widower with two children and was forced into a life where much hard household drudgery was necessary. To the surprise of her friends she entered on her new life with zeal and has done more hard work than would fall to the lot of most women.

This case represents an example of extreme selectivity of response. Slight pains or aches were attended to and their importance magnified. Anyone, if he cares to, can sit still for a moment and find that his body will give many signals of distress — a tooth is grumbling, the skin itches, the stomach has a heavy feeling, the heart is pumping, there is a peculiar taste in the mouth. In ordinary interesting activity these sensitivities to bodily functioning are ignored. But when one is placed in an uninteresting situation the attention may be directed to sensitivity of bodily functioning and if there is any gain in so doing, some aspect of the bodily functioning may be overemphasized. That seems to be what happened in the case above described.

Neurotic behavior. — This type of behavior which overemphasizes a type of response yielding a *temporary* satisfaction is called *neurotic* behavior. Adler has described the neurotic in great detail. His language and point of view differ from ours but his descriptions are accurate and clear cut. Adler tends to make his subjects conscious of their position through wants and aspirations. He speaks of the "consciousness of the weak point" where we have spoken of "baffled behavior." Adler holds the teleologic point of view, in which man controls and guides his activities for a purpose. Our descriptions are entirely in terms of stimulus and response, ignoring, except where specifically stated, the possibility of the person's verbal response to his own conduct. With these distinctions in mind the following description by Adler of the neurotic illustrates well what is meant here by "selective behavior":

> The consciousness of the weak point dominates the neurotic to such a degree that often without knowing it he begins to construct with all his might the protecting superstructure. Along with this his sensitiveness becomes more acute, he learns to pay attention to relationships which still escape others, he exaggerates his cautiousness, begins to anticipate all sorts of disagreeable consequences in starting out to do something or in experiencing an injury, he endeavors to hear further and to see further, belittles himself, becomes insatiable, economical, constantly strives to extend the boundaries of his influence and power over space and time, and at the same time loses that peace of mind and freedom from prejudice which above all guarantee mental health. His distrust of himself and others, his envy and maliciousness, becomes gradually more pronounced, aggressive and cruel tendencies which are to secure for him supremacy over his environment, gain the upper hand, or he endeavors to captivate and conquer others by means of greater obedience, submission and humility which not infrequently degenerate into masochistic traits; thus both heightened activity as well as increased passivity are expedients ushered in by the fictitious goal of an increased power, of a desire to be above, of the masculine protest.[1]

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[1] Adler, A.: *The Neurotic Constitution*, pp. xiii, xiv. Dodd, Mead and Company, 1917.

Through this figurative language one can perceive the existence of the drive or urge and the selective behavior which strives to satisfy that urge. It is unreasoning behavior. It is behavior that sees only the near results and ignores the total net result of the behavior. These defense or escape mechanisms have been classified into two types: (1) that in which the behavior is of a passive, unresistant type and (2) that in which the behavior is active and dominating. These two types have been called introvert and extrovert respectively.

Substitute mechanisms. — A second type of response to a baffling situation is the substitute activity or compensation. There is nothing abnormal or pathological about such behavior. In general it may be divided into two quite distinct types. In one type where one organic drive is thwarted, activity may be switched to satisfy another drive. The sex urge for instance becomes active in adolescence. But in modern society it cannot have its complete gratification often until ten or fifteen years later. In the meantime there are other urges to be gratified. There is athletics and the urge of competition. There is school and the urge of curiosity and scholastic success. There is business and its urges. Perhaps underlying all of these is the sexual urge supplying part of the driving force. But, at least, the major satisfactions during this period are not what one calls sexual.

The second type of compensation is where the original urge is gratified but in an indirect or roundabout way. The man who dominates over his family because of his inferior position in his office is a stock example of this type of compensation. Bodily inferiorities often lead to this form of substitute gratification. The little man struts as he walks; the tall woman slouches. Women try to compensate for natural ugliness by a beauty of manner or of character or by means of personal adornment. The sickly boy may get his satisfaction by being studious; the dull boy may get his satisfaction by being athletic. (These compensations have always been recognized and much overemphasized — they are not the rule but exceptions to the rule. The rule is correlation, not compensation. Accordingly one finds that bright children are as a rule stronger and healthier than average children, and that those who go out for athletics in school or college are not necessarily the ones who are below average in intelligence.)

These compensations illustrate the tendency toward selectivity of response in a baffling situation. In the first case a selection is made of internal stimuli (drives) and some are neglected (for the time being) in favor of a more energetic endeavor to gratify others. In the second case, that stimulus is selected which gives promise of leading to the success desired. For the school boy if success does not seem on the way through the avenue of books, then some other means such as athletics will be tried. In this way life is a continuously selective process.

Verbal expression of defense-escape mechanisms. — The responses in baffling situations which have just been described have been more or less of the "emergency reaction" type. But human beings are provided with better mechanisms for meeting novel situations, as heretofore described in the chapter on reasoning. The tendency to verbalization, which is such an important adjunct of reasoning, however, often plays a part in the baffling situation not altogether worthy of this supreme of man's functions. The defense and escape mechanisms instead of having their outward or overt expression may have a verbal or mental expression. The extrovert child who would find his satisfaction in an excess of activity may get the same satisfaction by imagined activity. The boy who likes pirate, Indian, and detective stories is getting his satisfaction through the imagination. The movie "thriller" gives the same outlet. Perhaps the most common of these "conquering hero" mechanisms is that of simple daydreams in which the child pictures himself as a hero of some sort according to his fancy. The introvert on the other hand may indulge in daydreams of the "suffering hero" type in which the child imagines himself being neglected or injured, this resulting in sympathy or distress on the part of those who care for him. The terms extrovert and introvert have been used in two senses. In one sense, the term extrovert denotes those who find their satisfactions in overt activity, while the introvert finds his satisfaction in imagined activity. The two terms are used in this book with a different meaning. Extrovert refers to those persons who find their satisfactions in positive activity whether overt or imaginal, while introvert refers to those persons who find their satisfactions in passivity and lack of resistance whether of an overt nature or only in imagination.

These mental mechanisms of escape or defense do not deserve the importance which some writers have given them. Quite often our thoughts represent only a froth over a troubled sea of deeper organic reactions. Such is undoubtedly the case with the language mechanisms above described. Probably the facts are something like this: A baffling situation arises. The restraints and conventions of society prevent the explosive activity which would normally be the response in the situation. The only immediate response is the one of internal, organic, emotional adjustment which would accompany the inhibited explosive activity. The verbal responses of "conquering hero," "suffering hero," and the like are responses to certain outside stimuli *plus* this inner reverberation coming from the sympathetic nervous system. Daydreams (as well as night dreams) are products largely of inner stimuli. Staring at the blank wall may be the best of all settings for the daydream, the essential stimulus being some inner disturbance. In this sense our language mechanisms in response to a baffling situation are a species of perseveration kept alive by the underlying organic disturbance — the latter being the response that is made to a baffling situation.

Verbal substitution responses — rationalization. — Finally psychologists describe another mechanism used in a baffling situation which is called "rationalization." Here the higher powers of thought are called into play to justify some course of activity which satisfies some urge. This is another illustration of the tendency on the part of our responses to baffling situations to be selective. Of this Gates says:

> Rationalization is a form of thinking or reasoning, that is, of sifting data, in which our personal desires are selective factors which guarantee an agreeable conclusion. Ideally, reasoning is the process of impartial manipulation of the evidence to achieve the logical conclusion, however disastrous the result may be to our own wishes. Rationalization means more or less complete blindness to all evidence except what furthers our side of the case.[1]

The two types described above in connection with the substitute activities exhibit themselves in connection with the mechanisms of rationalization. In some cases where a given urge or drive seems irresistibly blocked the so-called "sour grapes" mechanism may arise. If we can't have what we want, we tend to persuade ourselves that it is not worth having, and that it is below our dignity to pursue it further. The man who finds that he is not going to make the grade of the Ph.D. may immediately assume a different attitude toward what he recently desired so keenly. He may become of the opinion that the Ph.D. degree is of little financial worth, that the dissertation required is of very artificial and remote value, etc. The other type is one where we gain the end sought at the expense of consistency. Some factors are magnified in importance whereas others are minimized or neglected entirely. "Speculation fever" is an excellent example of this. When "speculation fever" comes there is a strong desire to buy, whether it be land or securities. At any time various economic factors can be found which are favorable and others which are unfavorable. But when the desire to buy comes, the favorable factors are attended to and the unfavorable factors are neglected. It may be that trade is good and enthusiasm runs high. These facts may be noticed, but the fact that credit is being over extended may be neglected.

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[1] GATES, A. I.: *Psychology for Students of Education*, p. 191. The Macmillan Company, 1923.

Reasoning *vs.* emergency reactions. — In the chapter on reasoning it was pointed out that man's unique method of response in a new or unfamiliar situation is that of reasoning. There reasoning was contrasted with the method of trial and error, and later it was shown that reasoning was a form of trial and error using verbal and other implicit reactions which cut short the process of trial and through greater resourcefulness lead to better chances of success. In a "baffling situation" one should take time to think. The situation should be analyzed. Past experience should be searched for rules of cause-effect that may apply in the present situation. Insofar as possible the self with its desires should be eliminated from the discussion. No factor should be minimized or neglected because it is hostile to our interests. Thinking should be impersonal. The various alternative solutions of the problem should be squarely faced and judged in the light of the data available. When the problem has thus been squarely and impersonally solved the solution should be put into practice with no hesitation or fear.

Contrast that method of meeting a new situation with the methods already described. The "usual" method is to try something immediately. And this immediate activity is normally reinforced by the sympathetic nervous system. To do nothing until after deliberation, although the distinctly "human" method, is difficult and has to be learned. Perhaps there is no other one habit which it is more important to learn in childhood than the habit of taking an impersonal stock of the situation. This surely is a habit just as saying "excuse me" or being honest is a habit. Parents can teach this habit best by meeting the baffling situations about the home in a deliberative, impersonal way in the presence of the child. To meet new situations in an impulsive way teaches the child to do likewise; to meet them in an unemotional, deliberative way also teaches the child to do the same.

There are many schools of psycho-analysis employing several different methods. Most of them delve back into the subject's previous history in an endeavor to uncover the original experience which gave rise to the present pathological condition. The statement is often made that the very uncovering of the significant facts of the past is sufficient to correct the difficulty. Common sense would say that the most effective way of helping a case of pathological conduct would be to study the forces working in the present situation. So far as possible, the desires and urges of the subject should be uncovered. The situation should be thoroughly analyzed so that the factors which are baffling may be understood. Then the subject should be required to approach his situation in an impersonal way with the aid of the doctor, and to attack it in the deliberative, detached manner that should originally have been employed. Such a method is the logical one and in the testimony of several psychiatrists is the one most likely to reach success. Hamilton in his study of nervous patients in a mental-hygiene survey of a city in Mississippi used the technique now to be described. First he asked the following questions:

(1) What are your present discomforts and disabilities? Give me a complete list of them, regardless of what you may have been told as to their imaginary nature.

(2) Endeavor to give me an absolutely frank account of your family, your neighbors, your job and your economic problems in terms of what you think and feel and do about them. You need have no fear that, in the circumstances, frankness will involve disloyalty to anybody: it is your obligation to get well for the sake of those who are interested in you, and I can't help you unless you are frank with me.

(3) Tell me all about your sexual life: I wish to know as much as possible, not merely about your sexual acts, but about all the troublesome, shameful, painful difficulties which you may have had or may now have with sexual urges. Do not forget that everybody has a lot to blush about in recalling these things. It will be helpful to know your past and present attitudes and convictions with reference to sexual matters. You must be

absolutely frank with me, else this examination cannot profitably be continued.

(4) Give me a brief sketch of your life in chronologic order. This should include information concerning your family history, your successive relations to the family situation, illness which you have had and all past events which you may regard as having been factors in the production of your nervousness.

These questions were not always asked in the above form and order since it was often necessary to obtain the patient's confidence before it seemed wise to intimate to him that such information was sought. After his story had been obtained all apparent causes of his nervousness and all apparently hurtful reactions were taken up as separate topics for discussion. I find it helpful at the outset to explain to the patient that we are all inclined to turn our mental backs upon recollections and inward promptings which might seem, if squarely faced, to impeach us before our own eyes as unworthy persons.[1]

Summary. — Much of pathological conduct finds its origin in thwarted drives. Pathological conduct in this sense may be defined as a response to a baffling situation. In human affairs this baffling situation may be one of three types: (1) an actual obstruction in the environment which prevents the fulfilment of desire; (2) the acquired habits and ideals, or the taboos and conventions of society; (3) the conflict of two or more urges. Pathological conduct seems to resolve itself into two main principles: (1) In baffling situations there is a tendency to make an immediate "emergency reaction" instead of first deliberating impersonally and then acting on the results of the deliberation. (2) In baffling situations there is a tendency toward selectivity of response, making the subject more sensitive to certain stimuli, reactions to which promise success, and less sensitive to other stimuli, reactions to which promise failure. These two principles are seen at work in all of the traditional formulations of pathological conduct. The *defense and escape mechanisms* clearly come under the two principles. Two types of response in the defense and escape mechanism can be observed: (1) the extrovert which leads to increased activity and (2) the introvert which leads to lowered activity and increased passivity or nonresistance. The *substitute activities* or *compensations* also illustrate the principle of selectivity. Substitute activities may be divided into two groups: (1) in which one drive being thwarted activity is switched to satisfy another drive and (2) in which the original drive is satisfied but in an indirect, round-about, peculiar way. *Mental mechanisms* such as the "conquering hero" or "suffering hero" types and daydreams seem to be escape or defense mechanisms in which the noteworthy reaction is a verbal one. Quite probably these verbal reactions, however, are mere reverberations from an underlying organic response which does not have its normal immediate impulsive concomitant overt response because of the restrictions of conventional living. *Rationalization* is an example of substitute activity on the verbal level illustrating well the principle of selectivity.

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[1] Hamilton, G. V.: *An Introduction to Objective Psycho-pathology*, p. 22. C. V. Mosby Company, 1925.

In a baffling situation the typically human response is first to deliberate impersonally, care being taken to analyze the situation carefully, to recall past experience bearing on the situation and above all to make no discrimination between the factors involved, whether or not they are favorable to an immediate gratification of our desires, and then to act decisively on the results of this deliberation. To think, then act; to think impersonally and to act on the basis of impersonal thought are habits. Such habits are among the most important to be learned during childhood. To help a person who has fallen into "pathological conduct," the best approach is first to analyze the present situation so that desires are uncovered and the baffling situation is laid bare and then to lead the person to reflect impersonally on the problem.

CHAPTER XIV

SOME FORCES GOVERNING CONDUCT

Man's conduct adapted to environment — Climate, a geographic factor which controls conduct — Geographic conditions other than climate — Population as a factor in the control of conduct — Economic factors which control conduct — Marriage and the birth rate — Crime — The place of women — Raw materials — Physical products of invention as factors controlling conduct — Human institutions — Democracy — Summary.

Man's conduct adapted to environment. — Man is one with the lower animals in the necessity of adapting himself to his environment. Lower forms of life have narrow means of adaptation and consequently adaptation is accomplished to a great extent biologically; that is, through elimination of the individuals who are unadapted to any specific environment and consequent selection of those who are adapted. But man has greater powers of adapting his conduct to meet environmental exigencies. The means which man employs in adjustment is not only a regulation of his own conduct but also a control over the environment. These means of control, as evidenced in a material culture and human institutions, again become a feature of the environment to which man must adjust himself. So man finds that his conduct is governed by certain large environmental forces — both natural and the result of his own invention. A study of the part played by these environmental forces in governing conduct has an important bearing for education. Education is interested in establishing valid objectives of conduct education. But as was shown in Chapter IV, except for certain basic habits with regard to health, thrift, and personal matters, valid habits are not known. Certainly in formulating the habits which should be the basis of conduct education we should not take the *status quo*, for the *status quo* cannot be justified. Each nation has a different set of folkways, and the *mores* change with changing conditions. On what basis, then, can it be said that one set of social customs is superior to another? We train our youth in our ways because they are our own. These different customs are not different in a purely random, chance fashion, but are the result of certain large environmental forces which have molded conduct into forms and patterns much in the same way that these same forces have given rise to biological modification. One of man's responses in compliance with the need for adaptation has been an accumulation of tools, institutions, and other forms of material culture which also act as forces shaping and governing conduct. If we could learn and understand these laws, then we would have a basis for setting up conduct objectives in education; objectives which would change as the environmental forces themselves change.

Climate, a geographic factor which controls conduct. — Huntington has shown in his graphic fashion the influence of climate on civilization.[1] Although Huntington tends to see climate as a cause in all phenomena and hence to overemphasize the importance of climate, there is no doubt but that it is in part responsible for some of the differences in the races in different parts of the earth. To quote from him:

> One of the lines which we may seek for an answer is by a comparison of the character of Europeans in tropical countries with their character in the temperate zone. Whatever differences we may find are presumably due partly to physiological and partly to sociological causes, but they manifest themselves chiefly through the will. In tropical countries weakness of will is unfortunately displayed not only by the natives, but by a large proportion of the northern sojourners. It manifests itself in many ways.

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[1] Franklin, Thomas, traces in *The Environmental Basis of Society*, the development of the climatic theory from Hippocrates to the present. The Century Co., 1925.

Four of these, namely, lack of industry, an irascible temper, drunkenness, and sexual indulgence are particularly prominent, and may be taken as typical. Others, such as proneness to gambling and disregard for the truth, might equally well be considered if space allowed.[1] . . . Little by little, even though he [the northerner who goes to the torrid zone] retains perfect health, he slows down. He does not work so hard as before, nor does the spirit of ambition prick him so keenly. On the low, damp seacoast, and still more in the lowland forests the process of deterioration is relatively rapid, although its duration may vary enormously in different individuals.[2] . . . Few people will question the reality of the tropical inertia. It is the same lassitude which everyone feels on a hot summer day — the inclination to sit down and dream, the tendency to hesitate before beginning a piece of work, and to refrain from plunging into the midst of it in the energetic way which seems natural under more stimulating conditions.[3] . . . Nowhere else, during extensive travels in America, Europe, and Asia have I seen so much drunkenness as in Guatemala.[4] . . . The last of the ways in which weakness of will is evident in tropical countries is the relation of the sexes. Its importance can scarcely be overestimated.[5] . . . The causes of these conditions are various. Many writers dismiss the matter by saying that the social standards of tropical people are low and tend to cause northerners to conform to them. That is true, but it explains nothing.[6]. . . Either the actual temptation to sexual excess is greater in the tropics than elsewhere, or else the inhibitory forces are weakened by the same processes which cause people to drink to excess, to become unduly angry, and to work slowly.[7]

Merely to show correlation is not to demonstrate causes. For this reason the foregoing statements lack entire convincingness. Yet, it seems highly probable that climate is one factor causing the differences noted above. Such differences would imprint themselves in the *mores* of a country and would tend to perpetuate themselves. Some think that the same moral standards cannot be enforced on Latin and Puritan alike. Part of the difficulty of racial assimilation in Hawaii at the present time is the mingling of racial cultures and traditions from countries of different climates.

Geographic conditions other than climate. — Climate causes many other conduct differences. In desert countries the need for vegetation and water leads to a nomadic life, a life which does not imply a settled existence but a wandering to and fro in search of moisture and vegetation. This, of course, precludes the building of an extensive national culture. In agricultural countries, life is more settled, with the resulting culture that develops in a settled life. Cities with their permanent buildings of steel and brick also represent a settled existence. The sparsity of desert life results in a set of conduct standards that permits raiding and plundering and consequent feuds. Desert life leads to habits of laziness, endurance, courage, etc. The sense of truthfulness of desert dwellers is strong as contrasted with those found in cities who lead mercantile lives. The interdependence of those living in the desert and their free, open life lead to habits of hospitality, whereas those who live more or less independent lives in large cities or who tend to live and work indoors develop habits of inhospitality. An agricultural life, on the other hand, promotes habits of industry and thrift. Living, too, tends to be more settled, and hence much greater value is set upon habits of regularity. Foresight, at least concerning the activities connected with their living, is important in agricultural communities. An agricultural life promotes peacefulness, law-abidingness, and other habits of submission and obedience.

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[1] HUNTINGTON, E.: *Civilization and Climate*, p. 68. Yale University Press, 1915.

[2] *Ibid*, p. 69.

[3] *Ibid*, p. 70.

[4] *Ibid*, p. 71.

[5] *Ibid*, p. 72.

[6] *Ibid*, p. 73.

[7] *Ibid*, p. 74.

Population as a factor in the control of conduct. — Pressure of population has its direct influence on conduct. Where population is sparse, habits of independence are developed. Intolerances, bigotry of attitude, and feuds find fertile ground in thinly populated districts. Where population is dense, habits of adjustment to the presence of other people are born. Courtesy, respect for the opinion of others as well as a degree of greediness and craftiness develop. Where people are few the stranger is suspected; where people are many the stranger is ignored.

Economic factors which control conduct. — Next in importance and closely allied to the preceding topic are the factors which we call economic — partly of natural origin and partly of man's own making. As usual in order to discover the cause-effect relationship one must have changes in the causes which are connected with changes in the effects. These changes in economic conditions are best and most easily exhibited in the changes of "business cycles," which are changes both in the volume and speed of trade and in the amount of credit. Hexter has done a splendid piece of work in unraveling some of the relationships between economic and social factors. Hexter's relationships are as follows:[1]

PAIRED VARIABLES	CORRELATION COEFFICIENT[2]	TIME — RELATIONSHIPS
Birth rate and wholesale prices	+ .705	Birth lags by one month.
Birth rate and unemployment	+ .696	Births lead by 17 months.
Birth rate and death rate	+ .553	Births lag by 12 months
Stillbirth rate and wholesale sale prices	+ .348	Stillbirths lead by 2 months.
Death rate and wholesale prices	+ .613	Deaths lead by 17 months.
Death rate and unemployment	— .361	Deaths lead by 10 months.
Marriage and wholesale prices	+ .469	Marriage leads by 1 month.
Divorce and wholesale prices	— .308	Divorce lags by 24 months.
Desertion and unemployment.	— .268	Desertions lead by 2 months.

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[1] HEXTER, M. B.: *Social Consequences of Business Cycles*, p. 161. Houghton Mifflin Company, 1925.

[2] The coefficient of correlation is a measure of the degree to which two series of numbers move together. Hexter was able to obtain values of birth rate, death rate, wholesale prices, unemployment, divorce, marriage, and desertion for a number of consecutive months. These various measures do not increase or decrease synchronously. The coefficient of correlation is a measure of the degree to which they move together. If the coefficient is zero, there is no relationship. If the coefficient is positive, one variable increases as the other increases. If the coefficient is negative, one variable increases while the other decreases. It was found that sometimes the relationship is closer if the values of one variable are correlated with values of the other variable a month or two earlier or later. This is known as lag.

Cause and effect are exceedingly difficult to disentangle. In some cases it is wise to assume that the social phenomena are the cause of the economic variations and in other cases that the economic variations are the cause of the social phenomena.

Marriage and the birth rate. — Hexter passes in review work done by many economists which shows the relationship between marriage and various measures of economic change. His review leaves little doubt that marriages increase with prosperity and decrease with adversity. This is shown in annual fluctuations, seasonal variations, and cyclical fluctuations in data which come in the shape of monthly reports.

Concerning divorces Hexter says:

> Our findings suggest, then, that when wholesale prices have reached the high points of their cyclical fluctuations divorces libels are at the low points of theirs. Note, however, that the maximum coefficients reached in this study of divorce are far lower than those maximum coefficients reached in other comparisons. We very safely conclude, therefore, that divorces are not as sensitive as are such human incidents as births, deaths, and marriages, when compared with economic conditions and influences.[1]

Raymond Pearl in his *Biology of Population Growth* shows by means of a study of geographical differences in wealth that the same law between birth rate and wealth holds that was demonstrated by Hexter. He says:

> It is at once evident that generally in this table as the birth rate goes up the average per-capita wealth goes down. The next correlation between the birth rate per 1000 women and the average per capita value of all property, when population (as of 1910) is held constant — in order to free the result of spurious correlation — is
>
> $$r_{xy \cdot z} = -0.615$$
>
> . . . It appears to be generally the fact that there is an inverse or negative correlation manifest amongst human beings between the birth rate and the biological quality or adequacy of the environment for the maintenance of human comfort and well-being. The more comfortable and higher the standard of living, the lower the birth rate and *vice versa* . . . .

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[1] HEXTER, M. B.: *Social Consequences of Business Cycles*, p. 159. Houghton Mifflin Company, 1925.

Relative wealth makes possible, and is correlated with a relatively favourable and easy environment for human existence. On the physical side this means better food, housing, etc. On the psychological side it means more avenues and opportunities of recreation, more varied intellectual interests, and generally wider outlets for nervous energy. These things in turn, it is suggested, correlate with less frequent sexual activity, and with a lower birth rate. At the other economic extreme we have the opposite picture. Poverty correlates with a poor environment for human existence, with poor food and housing, and on the psychological side restricted opportunities for recreation, narrow intellectual interests, and generally only two reliable outlets for the speedy and satisfactory relief of nervous tension, namely, alcohol (which is now at least theoretically barred) and the sexual relation.[1]

Crime. — Economic factors are also correlated with other conduct differences. Parmalee in his *Criminology* says, concerning certain graphs which he presents of the price of wheat and crimes against property:

> These charts indicate that in these countries there is a general tendency for crime against property to increase as the prices of cereals rise, and for these crimes to decrease as these prices fall. The correlation is not always exact, and there is frequently a noticeable lag, but this is to be expected since it usually requires a little time for the economic changes to influence the criminality. Many more statistics could be cited which show that the same situation exists in other countries, and there is good reason to believe that this correlation exists with a fair degree of regularity all over the world.
>
> It would also be possible to show that inverse correlation exists between changes in wages and crimes against property, so that as wages rise these crimes tend to decrease, and as wages fall these crimes tend to increase. But this correlation is not as close or as apparent as the direct correlation between these crimes and prices, because wages change more slowly than prices, and therefore cannot have so much effect at any one time upon the extent of criminality.
>
> Changes in prices and wages usually cause changes in the economic welfare of the great majority of the people. A rise in prices, especially in the prices of such articles as the staple foods, is almost certain to raise the cost of living for the poorer classes, since wages do not ordinarily rise as fast as prices. In similar fashion a fall in wages may cause a rise in the

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[1] Reprinted from *Biology of Population Growth*, pp. 161, 163, 168, by Raymond Pearl, with permission of and special arrangement with Alfred A. Knopf, Inc., authorized publishers., 1925.

> cost of living, though this happens rarely, since prices fall usually as fast or faster than wages. These facts indicate, therefore, that there is a causal relation between economic welfare and crimes against property.[1]

And in another place he says:

> Economic factors are doubtless very powerful in creating the professional criminal. Some of these criminals, perhaps many of them, possess weaknesses and defects of character which have played some part in leading them into criminal careers. Economic and other social forces may have been the sole causes in the criminality of other professional criminals. But even in the cases where defects of character are partly responsible, economic forces also are almost invariably at work, and in many of these cases better economic conditions would have restrained the defects of character from giving rise to criminality.[2]

The place of women. — Economic factors are powerful influences in determining the place of women. Agitation by those interested in women's suffrage was carried on for many years in England and the United States with little success. Then the war came, and woman suddenly achieved a new economic importance. When labor became scarce women found that they were welcome in industry. This same force made woman's suffrage an easy achievement directly after the war in the United States. Since that time the independence of women and their continuance in industry and business life have continued, but for other reasons only part of which are economic. Perhaps the most important factor is that managing the home has been relieved of much of its drudgery. Foods come prepared; clothing is bought ready made; and mechanical conveniences, such as the vacuum cleaner, running hot water, the telephone, electric lights, the modern bathroom, etc., all have tended to remove the drudgery from housekeeping. Numbers of women have been forced to seek other outlets and have entered business, increased their social activities and recreations, or given more care and attention to their children. It has been a time of strain and stress and with the new freedom much maladjustment has occurred.

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[1] PARMALEE, M.: *Criminology*, p. 71. The Macmillan Company, 1918.

[2] *Ibid.*, pp. 85, 86.

Raw materials. — The prevalence of raw materials and the energy of industry in large measure conditions the speed and mode of living. Small villages in Oklahoma or Texas dozed peacefully through the seasons in a customary round of living at one time. When the cry "oil" was heard, the pace of life quickened. Old restraints and inhibitions were cast aside. The fervor of speculation carried men away in its grip. New standards of conduct were adopted. Old frugal ways were cast aside before the advancing wave of wealth. Perhaps the speed and energy with which foreigners have been impressed in their visits to the United States are due largely to such factors. Unexploited natural resources lie ready to be tapped. There has been room enough for everyone. In the older countries of Europe, where there were no new sources of wealth and when society had reached an equilibrium, the stimulus to living was not so intense. Life adopted a slower tempo because there was nothing to quicken it. Society exacts its measure of respect and reverence on the one hand or dignity and austerity on the other in a country where the mold of society is set.

Physical products of invention as factors controlling conduct. — These factors naturally lead to the matter of the influence of material tools and playthings, of transportation and communication, and of social institutions on conduct. The automobile, for instance, has profoundly changed the traditional *mores*. It has helped to break down the reserve of young people. For several years now the older generation has been gasping at the unseemly conduct of the younger generation. The chaperone is a person of the past. Reserve, shyness, and coyness are not characteristics of the upgrowing generation. The days pictured by Jane Austen seem to have vanished entirely. The changes seem to be due more to the girls than to the boys. Girls dress with more freedom, they go about more freely, and they talk more freely. The body of inhibitions of the older generation is simply not a part of the mental equipment of the growing generation.

The automobile, moreover, has speeded life up; it has brought people into close contact and for long periods of time. It has permitted and encouraged rapid travel to the city, to the country, to the beach, to the golf course, to the dinner, to the dance. In this way it has been a dominant factor in breaking down the traditional habits of young people.

The automobile has also helped in increasing crime by making crime easier. Robberies are more frequent today partly because the automobile helps the robber to get away. Hardly a day passes but that the newspapers describe a bold daylight robbery in our large cities. One or two men, with no attempt to disguise themselves, enter a store on a busy street, hold up storekeepers and customers, and after taking what they care to, enter an automobile waiting at the curb and are quickly lost in the traffic. In the small town the bank or post office is robbed, and the bandits leave the town in a high-powered car at high speed, soon to be miles away and beyond capture. Here again, the automobile is not the cause of crime, but is one factor which makes crime greater than it otherwise would be.

The increased facilities afforded in the last century by the railroad, the steamboat, and later by the automobile, have changed eating habits. Once upon a time people were limited to a few foods. Their staple foods were the meat which was locally slaughtered and the grain which was locally milled. In the summer months they had what green vegetables and fruits could be grown. In the winter they lived on stored potatoes, turnips, cabbages, pumpkins and apples, home-cured meats, and the milk and eggs which their own stock provided. Green vegetables were unknown in either city or country in the north during the winter. Today we eat foods that are grown in all parts of the world. Fast transportation and improved refrigeration give us tropical fruits at all times of the year. Fresh green vegetables are available in city markets all winter. Today we may be free from the dietary ills that our forefathers experienced after a winter's siege.

Again the automobile is a factor in the conservation of natural resources. Since its advent thousands of people tour about the country during the summer months. Hitherto inaccessible streams and lakes are now opened to fishermen. The hunting grounds may be easily reached by automobile and increasing numbers of game birds and animals are killed each year. This increased accessibility of remote regions has raised a real problem in conservation. The automobile has been a potent factor in reorganizing recreation.

Human institutions. — Changes in the institution of the family means that family relationships shift and with them come changes in the conduct of members of the family. The institution of the family itself is a response to certain environmental conditions such as the pressure of population and the inequality in the number of the members of each sex. With monogamy there is one set of customs which have developed to govern the relations within and without the family. With polygamy or polyandry another set of *mores* arise for regulating the family relationships. There are variations in the occupations of the sexes. In some cases the women have been the agricultural laborers, men the hunters; in other cases women fill the commercial pursuits. Another common arrangement is for man to do the productive labor and woman to attend to domestic tasks.

With different family institutions go varying concepts of authority, courtesy, and the like. In each age there have been standards of obligations, duties, forbearances of the man toward the woman, and *vice versa*. In societies where a mother family is in force, the customs and ethics are quite the reverse of a father family society. In the mother family frequently the name belongs to the woman, the next male friend of a woman will be her brother and not her husband, and to her brother and not her husband will her loyalty be given in case of dispute. Words of relationship, modes of address, etc. are determined by the type of family. The type of family determines when the woman is to give her strength and help in all the ways for which circumstances offer opportunity. The double standards of chastity, so much the subject of current debate, are merely a custom which is a result of the type of family acceptable to our society.

Different nations possess widely differing sex *mores*. In Hindustan a wife gives great attention to her parents-in-law. The Serbian bride is ashamed of her marital relation, and thinks it indecent to address her husband in public. In Bulgaria the wives are from five to ten years older than the husbands. Pair-marriage is the form of sex relation sanctioned by our civilization. As Sumner[1] points out, it is monopolistic and exclusive. It nourishes pride and ambition. It tends toward the accumulation of great wealth and is a buttress against forms of socialism. Thus the family institution is conditioned by fundamental economic forces and in turn determines and establishes standards of conduct that influence every phase of our existence.

The church, as an institution, has always exerted a marked influence over conduct. In times past it has wielded what has amounted to civil power in requiring certain forms of conduct of its members. But today the church maintains its influence by recommending standards of conduct. Certain churches, for instance, forbid their members to dance, play cards, or attend the theater, and loudly decry ostentation in dress or the use of cosmetics. But the church itself must be subservient to the more powerful economic and cultural forces, and when these latter forces decree a change the church must relax (or raise) its standards.

Democracy. — This form of social control exerts its influence in every phase of our living. Democracy is not merely a form of governmental control. Democratic is a term that embraces all phases of group activity. It so seeps into every compartment of conduct that we speak of a man's being democratic much as we speak of his being courteous or kindly. Indeed democracy may be thought of as a confact, a mode of responding in a group situation. It shows itself in willingness to listen to the point of view of the other person, forbearance of domineering, putting a decision to vote, willingness to abide by majority decision. This set of reactions may permeate the home, the school, or the playground. Now this peculiar set of reactions which we call democratic loyalty depends upon the general form of social control which is in vogue. In an autocratic society castes and levels are formed, and a spirit of intolerance and domineering, or submission and subservience permeates all social relationships.

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[1] SUMNER, W. G.: *Folkways*, p. 372 ff. Ginn and Company, 1906.

Summary. — Conduct, as we find it today, often has the appearance of being without reason. And the standards in various parts of the world are different, also for no apparent reason. We tend to believe that the conduct of our group is right and we want to perpetuate this conduct by passing it on to our children. Some conduct is merely the residue of old conditions which have long since passed away. But the *mores* of a country are not purely passive — they are always being driven or forced by man's great organic drives. In this way the customs of a country are mainly the effect of various geographical, climatic, economic, and cultural factors which act as conditions against which the human organic drives react and crystallize into habits or customs. Where these climatic, economic, and cultural factors differ in various parts of the earth, we have conduct differences. When the economic and cultural conditions of a country change, the conduct of its inhabitants changes, but only in the face of opposition from the mature element of the population, which resists changes in its habitual ways of doing things.

CHAPTER XV

CHARACTER AND PERSONALITY

The need for definition of personality and character — Definitions of character — Summary of definitions of character — Definitions of personality — Summary of definitions of personality — What is personality? — What is character? — Character as confacts — Uniformity of response — Perfection of confacts — Character as response to the distant and future — Character *vs.* manners — Character and deliberation — Character and discrimination of situations — Character and native factors — Summary.

The need for definition of personality and character. — Those interested in education and psychology need to clarify the meaning of the terms *personality* and *character*. Until there is general delimitation of the meaning of these terms and agreement as to their usage, confusion in discussion is bound to result. But the matter has a more practical bearing than the mere didactic one. Educators are much concerned at the present time about "character education." Previous to 1919, books and articles on character education were comparatively rare. But in recent years more interest has been manifested, until today one finds educators at every turn writing and talking on character. In practically every convention and gathering of teachers, one finds at least one meeting devoted to character education. One reads such titles as these on recent convention programs: "The Future of Character Education in New York City," "The Function of Ideals in the High-School Curriculum," "Ethical Character as Interpreted by the — — Junior High School," "Experimental Approaches to the Measurement of Character," "Practical Procedure in Character Education in High Schools." Before this movement can make much headway, exactly what is meant by "character" must be more sharply defined. This definition must be in psychological and not spiritual or mystic terms, because character, as a product of learning, must be a something that happens to the reacting mechanisms. Exactly what changes are expected in the reacting mechanisms in the formation of character need to be sharply defined or described before progress can be made in reaching desirable results. It has been the purpose of the foregoing pages to analyze conduct. We shall make use of this analysis in trying to define and describe character and personality.

Part of the confusion which exists in the usage of these terms is due to the fact that they have too heavy a load. They are made to cover more than can be included in a single concept without causing the definition to be arbitrary. Accordingly it is our task to point out distinctions and differences which exist and to describe actual happenings, rather than to attempt to fix a meaning for the two terms, which of necessity must be more or less arbitrary.

Definitions of character. — Below is a miscellaneous group of definitions of character that have been culled from the writings of psychologists.

Myerson: "Conduct is the fruit of character."[1]

Webb: "Character is the sum of all personal qualities which are not distinctly intellectual."[2]

MacDougall: "Character is an organization of sentiments."[3]

Prince: "Character is the sum total of the predominating dispositions or tendencies popularly called traits."[4]

Fernald: "Character is the quality of personality as opposed to intelligence which is the degree of personality."

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[1] Myerson, A.: *The Foundations of Personality.* Little, Brown and Company, 1923.

[2] Webb, E.: "Character and Intelligence," *British Journal of Psychology,* Monograph Supplement III: 2, 1915.

[3] MacDougall, W.: *Social Psychology,* p. 265. John W. Luce & Co., 1923.

[4] Prince, M.: *The Unconscious,* p. 532. The Macmillan Company, 1914.

Watson, J. B.: "Character is used when viewing the individual as a whole from the standpoint of his reactions to the more conventionalized or standardized situations (conventions, morals, etc.)."[1]

Warren: "The specific attitudes which develop during the course of life affect one another and result in the formation of general attitudes. These general attitudes constitute the various phases of the individual's *character*," and again, "Character is the general rating of an individual in any specific phase of mental life. It denotes the degree and trend of mental development in that particular sphere. In popular language the term is usually limited to a man's moral standing or rating. In psychology it has a broader application. It includes also his rating in the perceptual and ideational life, in the hedonic life, and in the motor life. The same man may be rated as malevolent, keen, sanguine, and energetic. These represent different phases of his character. Each phase of character may embrace a number of independent traits."[2]

Dewey: "Character is the interpenetration of habits,"[3] "Character is whatever lies behind an act in the way of deliberation and desire, whether these processes be near-by or remote,"[4] and again, "Character is that body of creative tendencies and interests in the individual which make him open, ready, warm to certain aims, and callous, cold, blind to others, and which accordingly habitually tend to make him acutely aware of and favourable to certain sorts of consequences and ignorant of or hostile to other consequences."[5]

Hollingworth, H. L.: "Character is the characteristic modes of behavior, the characteristic attitudes, reactions, and capacities."[6]

Allport, F. H.: "Character is personality with reference to socialization, self-seeking, and social participation. It is personality seen from the view point of social justice as measured in the dimension of legal and moral standards."[7]

Hollingworth, L. S.: "An individual's temperament is the particular combination of amounts of all these instinctive tendencies to action which have been inherited from persons who could live through primitive hardships to produce him. Under education, every child strives with varying degrees of effort, according to the rewards and punishments met, to adapt these tendencies, in overt action, to the requirements of civilization. The set of habits thus finally formed is known as character."[1]

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[1] Watson, J. B.: *Psychology from the Standpoint of a Behaviorist*, p. 412. J. B. Lippincott Company, 1919.

[2] Warren, H. C.: *Human Psychology*, pp. 360, 374. Houghton Mifflin Company, 1919.

[3] Dewey, John: *Human Nature and Conduct*, p. 38. Henry Holt and Company, 1922.

[4] Dewey, John and Tufts, J. A.: *Ethics*, p. 203. Henry Holt and Company, 1908.

[5] *Ibid*, p. 255.

[6] Hollingworth, H. L.: *Judging Human Character*, p. 2. D. Appleton and Company, 1922.

[7] Allport, F. H.: *Social Psychology*, p. 124. Houghton Mifflin Company, 1924.

Kulp, D. H. II: — "The complex of habits gives character; the complex of wishes gives will; the complex of the two gives personality."[2]

Allport, G. W.: "There is likewise confusion between personality *devaluated* and personality *evaluated*, that is, between personality and character."[3]

Bagley: "Moral character certainly presupposes as its basis a multitude of effective specific habits. To paraphrase an ancient proverb one may safely say, 'Take care of the habits, and moral character will take care of itself.' This is not quite true, of course, for the factor of ideals must be reckoned with; but it is at least as true as the proverb which it paraphrases — and that is saying a good deal. But again, we must guard against the danger of using the term 'habit' in too general a fashion. Character or social efficiency does not rest upon habit in general nor upon generalized habit; it rests upon a vast number of little, specific habits: the habit of saying 'four' when the formula 'two times two' is given; the habit of saying 'I shall' when simple futurity is to be implied; the habit of bathing at regular intervals; of brushing one's teeth; of blacking one's boots; of speaking distinctly; of speaking in a pleasant tone; of speaking courteously; of not speaking at all when others are speaking; of moving gracefully; of remaining motionless under certain conditions; of writing legibly; of taking off one's hat to one's elders and to ladies; of giving precedence to women when passing through a doorway; of standing erect and looking one's interlocutor in the eye; of working steadfastly at this task or that until it is completed; of breathing properly; of repressing the impulse to yawn, the impulse to strike; and a hundred other impulses that nature never intended to be repressed, and yet the habitual repression of which is essential to civilized life. One could perhaps be 'moral' if some of these habits were lacking; we know that one could not be socially efficient, and we doubt whether one could be moral if all of these habits had failed of development."[4]

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[1] Hollingworth, L. S.: *Gifted Children; Their Nature and Nurture*, p. 117. The Macmillan Company, 1926.

[2] Kulp, D. H. II: *Outline of Sociology of Human Behavior*, p. 83. H. G. Seiler, 1926.

[3] Allport, G. W.: "Concepts of Trait and Reasonability," *The Psychological Bulletin*, xxiv: 284–293, May, 1927.

[4] Bagley, W. C.: *Classroom Management*, pp. 228, 229. The Macmillan Company, 1907.

Summary of definitions of character. — This conglomeration of definitions represents many different emphases and points of view. Some are definitely opposed to others, and yet there are certain relationships that run through all. These definitions may be summarized as follows:

1. Character has to do with those phases of man's behaviour other than the intellectual.
2. Character is observed in the crystallization of definite traits.
3. Character represents an organization of behaviour.
4. Character is related to conduct. Some claim that character is a summation of conduct — others claim that conduct issues from character.
5. Character in a limited (and usual) sense refers to moral character, that is, one's behaviour relative to the conventions and standards of society.
6. Character is the result of an evaluation.
7. Character has to do with the outward expression of inner attitudes or dispositions. Gates says that this expression is focused on the face and may be read there by those with trained perception.
8. Character in a limited sense refers to socialization, self-seeking and social participation.

Definitions of personality. — Turning now to personality one finds the following definitions in psychological literature:

Kempf: "Personality is the habitual mode of adjustment which the organism effects between it's own egocentric drives and the exigencies of the environment."

Prince: "Personality is the sum total of all the biological innate dispositions, impulses, tendencies, appetites, and instincts of the individual and the acquired dispositions and tendencies."[1]

Kantor: "Personality is those actions which represent the actual movements and behaviour of any particular person," and again, "disposition or tendencies to action." [2]

Warren: "Personality is the *general rating* of an individual. It embraces all the various phases of one's character — temperament, intellectuality, skill, and morality," and again, "Personality is general character — it depends upon the general phases of our character."[3]

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[1] PRINCE, M.: *The Unconscious*, p. 532. The Macmillan Company, 1914.

[2] KANTOR, J. R.: *The Principles of Psychology*. Alfred A. Knopf, Inc., 1924.

[3] WARREN, H. C.: *Human Psychology*, p. 383. Houghton Mifflin Company, 1919.

Allport, F. H.: "Personality traits may be considered as so many important dimensions in which people may be found to differ. Personality is the individual's characteristic reactions to social stimuli and the quality of his adaptation to the social features of his environment."[1]

Watson, J. B.: "Personality includes not only these [character-conventional] reactions, but also the more individual and personal adjustments and capacities as well as their life history. Popularly speaking, we would say that a liar and a profligate had no character, but he may have an exceedingly interesting personality."[2]

Summary of definitions of personality. — These definitions may be summarized as follows:

1. Personality is much more inclusive than character.
2. Personality represents the organization of behaviour.
3. F. H. Allport, would limit personality to reactions to social stimuli.
4. Personality is a *devaluated* description.
5. Personality refers to the dispositions or tendencies to action.
6. Personality represents a combination of *habits* and *will.*
7. There is a tendency to make personality refer to those reactions which are distinctive or unique.
8. Personality is popularly used in a sense not described in any of the above definitions. Personality is sometimes used to refer to a person's vigor, warmth, personal charm or attractiveness, as, "the actress had personality."

What is personality? — Personality is the portrait or landscape of the organism working together in all its various phases. It includes the intellectual level, and the types of intellectual response, the emotional adjustment, the balance of glandular secretions, working together as they do to make the man. In personality we are most concerned with the interworkings, the balance, the relative strengths and weaknesses, rather than with an inventory of specific connections. Personality is partly a matter of education and is in part innate. We are born with certain predispositions, certain strengths and weaknesses, certain pronenesses to yield in this direction and to resist in that direction.

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[1] Allport, F. H.: *Social Psychology*, p. 101. Houghton Mifflin Company, 1924.

[2] Watson, J. B.: *Psychology from the Standpoint of a Behaviorist*, p. 392. J. B. Lippincott Company, 1919.

Personality is partly a matter of physical condition. Organic disturbances, lesions, maladjustments, all contribute to personality. Physical defects, such as loss of hearing; above all such disturbances as faulty glandular secretion, neurasthenia, gastric malfunction, unbalance of metabolism, etc., strongly influence the personality. But personality is also the result of the learning of experience and is therefore in part of a functional nature. In the various experiences of life, behavior is quite apt to split up into conflicting and alternating complexes or groups, so that one has the more or less well-defined patterns of behavior in different situations. This truly is a form of conduct, but is an end result rather than a fundamental condition. Mass education today is hardly in the position to handle these more complex problems of the integration of personality. For a considerable time this must continue to be a clinical problem to be solved, if at all, by clinical methods. Education must proceed in the development of conduct in more direct ways, where results will be more immediately evident. We must therefore dismiss at this point the education of the personality, not as a matter which is not of concern, but as a matter which in our present state of knowledge we are not in a position to help.

What is character? — Character being more immediate is a more vital concern of education. What is character? Is it, as Bagley insists, synonymous with conduct, or is there, as Dewey suggests, a something behind the scenes which issues in conduct and which manifests itself, as Gates suggests, in facial expression? If character is conduct, then the task of education is easy and straightforward. If character is a mysterious internal disposition, impulse, or deliberation which issues into conduct, then education cannot proceed until this internal force is better described and labeled. Let us review our analysis of conduct to see if we have already answered these questions. Behavior was analyzed into types of reactions representing all of the combinations of muscular verbal, and visceral responses on the one hand, to peripheral, kinaesthetic, verbal, and visceral stimuli on the other. Conduct was decided to be the result of muscular and verbal reactions but not of visceral reactions. The viscera perform their functions, both autonomic and sympathetic, without a conduct phenomenon. The organic functionings of the body, important as they are, are not conduct, and should not be construed as such. This eliminates from conduct those distinct visceral reactions known as emotions, and also their reverberations which we know definitely as the feeling of emotion. It is true that the viscera may be a stimulus to conduct, but not a specific determiner. The great organic drives act as a sort of loose guide to conduct. They originate a searching activity, and the alleviation of their irritation is a cue for the cessation of that phase of activity, but they can hardly be said to determine conduct, much less character. When Dewey says, "character is whatever lies behind an act in the way of deliberation and *desire*," he cannot mean by desire the organic drives, because of themselves they are impotent in determining conduct, even though they may originate it. The great organic drives, to be sure, act as a sort of lane down which conduct must pass. When one runs off into conduct which too long ignores the organic drives, these drives well up and force a return. Hunger is periodic and irresistible, and so is sleep. Man cannot govern his peremptory demands for long. But until sleep calls, being awake allows a man much latitude in conduct. Hence it would be stretching the point very greatly to say that character is determined by the organic drives.

The claims of Dewey and others that character is an outward phenomenon of an internal disposition cannot be dismissed so lightly. There must be something to which these writers have reference. This is probably the readiness or unreadiness of the synapse. To review briefly our position with regard to this, every synapse presents a certain state of resistance. This may be translated into behavior terms as a certain readiness or unreadiness to respond. And every response has accompanying it a certain feeling tone corresponding to the preliminary state of readiness or unreadiness. It is this feeling tone accompanying a reaction that is mistakenly called an "emotion" or "feeling of value" by those who emphasize the within-out nature of character. But this feeling is a mere epiphenomenon, a mere accompaniment corresponding to a preceding state of readiness or unreadiness And this state of resistance is in part a phenomenon of metabolism, and in part a result of learning. In other words, the present state of readiness or unreadiness is a resultant of previous activity. Our present disposition, attitude, feeling of value, is a product of past experience plus the state of the organism as regards irritation, metabolism, etc. We are ready insofar as past experience has built up habits and the present state of the organism is favorable. The present state of readiness is an end result of all past learning. This inclines one to believe that those who consider character as an inner attitude or disposition are under a delusion. What one will do in any circumstance is the result of learning (and organic state). Our conduct is a response to a stimulus. The stimulus-response bond, which is learned, controls activity. The synaptic resistance is included in, and is a phase of, the stimulus-response bond. Character is the sum total of stimulus-response bonds — it is, in the broad sense, all of conduct. To specify that it is the intention, the purpose, the disposition, or the readiness to act is to limit character severely to a phase of behavior which may be the determining value of activity but which is unnecessarily restricted in its point of view.

This definition of character clarifies and simplifies the problem for education. No one knows exactly what it is to build a purpose or a disposition or a readiness to action. Bagley and Keith admit this with regard to the formation of ideals. They say:

> Relatively definite methods or patterns of teaching, as we have seen, are available to the teacher who seeks the two types of outcomes previously discussed (the habit-and-skill outcomes and the knowledge reactions);

> and in those fields, too, it is now possible with a reasonable degree of accuracy to measure the degree in which the desired outcomes have been attained. But when one approaches the more difficult task of establishing dynamic ideals and dependable standards, the suggestions as to procedure are far less definite, and objective measures of the results of teaching are almost entirely lacking.[1]

The doctrine of "ideals" as being an inner state has led to that most discouraging doctrine of concomitant outcomes.

> It is generally agreed that ideals may be impressed or developed either as direct outcomes of teaching and learning or as indirect or "concomitant" outcomes. . . . We all recognize, however, that strong and pervasive ideals may develop much more slowly and as a result of experiences that have not been explicitly directed toward this end,—that they may, indeed, be indirect or concomitant (accompanying) outcomes of learning-experiences, the direct outcomes of what are of a quite different character.[2]

This doctrine is an admission of defeat. Ideals are learned from something that is done, but the conditioning stimulus is unknown. On the other hand, if the ideal is discarded and the ideo-motor bond is substituted, the problem directly becomes definite and above-board. The principles of learning and teaching can be systematically applied, and results may confidently be expected. The problem of character formation is the problem of conduct education.

Character as confacts. — Character is usually thought of in a narrower sense than as comprising all conduct. In its narrower and more customary meaning it refers specifically to those *confacts* most highly prized by society. Some of these have been mentioned in the chapter on "Some Important Confacts." Just as a complete confact is very difficult to achieve or to find in others, so the highest type of character is difficult to attain. Certain confacts seem to be prized more highly than others as indices of character, such as honesty, trustworthiness, truthfulness, and accuracy.

[1] Bagley, W. C. and Keith, J. A. H.: *An Introduction to Teaching*, pp. 245–246. The Macmillan Company, 1924.

[2] *Ibid*, p. 246.

Uniformity of response. — There seem to be two essential features of conduct that go to make up the highest character. One is *uniformity of response.* A man is said to have formed a character when he responds uniformly in similar situations. Then his conduct becomes *predictable* and the man becomes *dependable.* The grocer may always give back the correct change, the night watchman may be prompt in his rounds, the teacher may always carry out her threats of punishment. These are all evidences of strong character. Even the thief may be depended upon to steal when opportunity presents, so that he is said to have formed a despicable character, although it is a dependable character.

Perfection of confacts. — The other essential feature of character is the *universality of response* to the *element from whence it occurs.* For most of us honesty is based on a host of specific habits — habits with respect to money, clothes, jewelry, books, tools, etc. — and habits with respect to persons — parents, children, teachers, the ticket taker, the customer, the opponent at cards. But it is possible not to respond to each situation separately as it presents itself, but to the element which is common to all such situations — as occurred in our illustration of honesty respecting the property of other people. This generalization of conduct seems to be the essence of character. For some persons this generalization is accomplished by bonds of the type, inner speech stimulus — conduct response. Persons of sufficient intelligence who can both grasp the generalization required and learn to control their conduct by their own thoughts have the best opportunity for achieving character. But such individuals are probably rare. It takes a rare combination of original capacity and careful early training to produce an individual who can respond in this way.

Character as response to the distant and future. — Again character may refer to responses to words or ideas referring to aspects of the environment which are abstract and distant, and not concrete and immediate. Possibly this is what Dewey refers to. But it is not a vague inner disposition but a definite response to those reactions of speech or ideation which symbolize aspects of the environment not immediately present. Such behavior cannot be immediately fulfilled but must run through a more or less lengthy series of preparatory steps, as when one prepares for an examination. The organic probably serves to give continuity to the activity and helps keep activity headed for the goal. This may be called an inner disposition, but power to control it is lost until it is considered with reference to the external stimulus. Some may consider the essence of character to be responses to kinaesthetic (verbal) stimuli symbolic of the abstract and far away in space and time.

Character *vs.* manners. — The essence of character is well brought out in the discussion as to the relation of manners to morals. The following quotation illustrates the prevailing point of view:

> The Filipino is temperamentally and traditionally polite, courteous, and generous. He shares with oriental peoples those qualities in a degree which often put to shame the manners of many other individuals in their personal contacts. The Filipino people are admired for these qualities. They should preserve and maintain them, and steadfastly refuse to imitate the ways of any whose manners are less polite and courteous. The schools should help the younger generation to maintain these habits of behavior, not primarily by talking or reading about them, but by securing practice in them.
>
> A danger that needs to be kept constantly in mind is that of mistaking outward manners of politeness for depth and strength of character. With these fine qualities of personal contact should go all of the qualities of honesty, fair play, and sincerity that make up character.
>
> In order that these desirable qualities should be cultivated in the children and be deeper than surface manners, it is recommended that the teaching be not separated from the activities and subjects representing the problems of real life.[1]

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[1] *A Survey of the Educational System of the Philippine Islands*, p. 242. The Board of Educational Survey, 1925.

This and similar statements in the survey report have been attacked as unjust in the Philippine Senate. The same point of view occurs in the following "joke":

> Mrs. Kindly (to neighborhood urchin): "Why aren't you polite and nice like Jimmie?"
>
> Freddie: "Aw, ma'am, he ain't nice, — dot' jus' manners!" — *Life.*

The distinction which the above quotations make is not, as the present author sees it, a distinction between inner and outer control. It is a distinction between a partial and a universal response. The implication in the Philippine survey which offended the Filipinos is that a Filipino is polite when you are facing him but is dishonest or treacherous when your back is turned. Likewise the anecdote clearly demonstrates that the distinction which Freddie makes is that Jimmie is polite only on occasion. The kind of character which is dependable or universal is one which seems to be controlled or governed from within. But the distinction is only seeming. Exactly the same forces of control are at play both in surface manners and in underlying character. In the latter case, however, the individual responds to an aspect of his surroundings which quite escapes the individual who is merely polite on occasion.

However much there is in social convention to scoff at, in another sense manners are of great importance. There is a tendency to be a little suspicious of training in manners. Manners are specific and apply only to rather circumscribed situations — the situations in which they were learned. Hence training in manners is sharply contrasted with the development of character. Character is thought of as that quality of the individual which makes him kindly in irritating circumstances, brave in the face of danger, honest under great temptation, trustworthy under heavy responsibility. This is contrasted with manners which are fickle — being polite to friends but boorish toward aliens; well behaved at home but a rascal abroad; deferent and gracious in the presence of those whom we respect but harsh and overbearing toward servants and inferiors.

Character grows out of manners, and manners are the foundation stones of true character. To be sure, manners are often vulgar, especially when we feel that they are fawning and insincere, the surface play of an underlying mean and hypocritical disposition. But the trouble is not that manners themselves are bad — they have not been carried far enough. On the other hand, it is impossible to think of a person of high character who is not well-mannered, at least along the lines which make his character great. One may conceive of a man of sterling integrity eating with his knife. But his manners which we could associate with integrity, such as keeping appointments, keeping agreements, fulfilling promises, good workmanship, respecting property, etc., probably could not be criticized. However, if we find that his poor table manners annoy other people or are unhygienic, then we would say that his character is faulty along the lines of respect for other people or good health. Perhaps the discrepancy attributed to character and manners arises from the emphasis usually given to each, for where in character we may prize such things as integrity, kindness, good sportsmanship, and the like, in manners people are only too often concerned with what is purely conventional.

Every act when first performed is a specific act and is performed in a specific situation. With the proper set or adjustment, the same act may be repeated again in that same total situation. Likewise, with the proper set or adjustment, certain parts or elements of the total act may be repeated under the appropriate stimulus. To be more specific, a small boy on coming into his house by a certain door is confronted by his mother, who says, "Take off your cap when you come into the house," and he complies as he has been accustomed to do in the past to his mother's requests. He learns to take off a specific cap when coming in a specific door and in the presence of his mother. But in time he may take off his cap or hat or whatever he has on his head when entering any door, in any house whatsoever, whether or not in the presence of a person. He even learns to distinguish between houses and stores. One would hardly dignify an act which follows *a request* by calling it good manners, although the act of taking off one's hat *without being told to* on coming into the house might be called good manners. If one takes off one's hat only when coming into one's *own* house, we should still call that good manners, but of a rather narrow sort. Manners may be of varying degrees of generality. Manners which work only in special situations we despise. Manners which work in any situation, no matter how difficult, we call character.

It is impossible to aim at general habits or qualities without utilizing special ones. One cannot achieve directly courtesy or kindness or chivalry or honesty; these must be reached *via* a number of more specific acts. It is not enough, however, to aim merely at "manners." One should aim to make the specific qualities general so that acts which originally function only in certain total situations will eventually be made to follow certain key aspects of the situation. This would be the formation of character. This is the program for the education of character and education must know the following in order confidently to set about this task: (1) the specific responses that are held to be the earmarks of the desirable character, (2) the key aspects of the situation which should bring about such responses. As an example may be mentioned "Being satisfied by justice — in the case of a conflict of interest." Such an extremely difficult trait is reached only by the way of such acts as obeying the rules when playing all kinds of games, seeing that others obey the rules, giving the opponent a fair chance, defending absent persons from slander, standing for fairness in elections, and so forth. And each of these is somewhat more general than the specific instance where it must be first encountered. Manners usually apply to certain specific situations. The man with perfect manners has the perfect character in those aspects where the manners apply. True character means the general character of these habits. Perhaps we need to recast our conception of manners to fit more closely the kind of character which we desire, or perhaps we need to recast our concept of character to fit more closely what we consider desirable manners. At any rate the two must play into each other, for the general depends on the specific.

Character and deliberation. — Dewey, presumably, is more responsible than anyone else for the current conception that character of the highest sort is guided or controlled by deliberation, thought, consideration of the effects of conduct as determined by previous experience. This conception of character permeates current theories of character as the following quotations show:

Kilpatrick says:

> I seem to see three things in the working of a good moral character: first, a sensitivity as to what may be involved in a situation; second, a moral deliberation to decide what should be done; and third, the doing or effecting of the decision so made.[1]

G. B. Watson says:

> Real character growth comes in proportion as either children or adults face their own problems frankly, predict consequences, make their decisions, and in practice suffer the consequences.[2]

Or again Watson raises these questions:

> Does character depend mainly upon discrimination, *i.e.*, the ability to see the consequences, in the long run, of each type of action? Does it depend upon the ability to learn from each past action something which will make the next one better, *i.e.*, growth? Is the good character primarily the one which is sensitive to the feelings of others, even of those far away in space and time. Is increase in the number and variety of shared interests evidence of character growth?[3]

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[1] KILPATRICK, W. H.: *Foundation of Method*, p. 337. The Macmillan Company, 1925.

[2] WATSON, G. B.: "The Project Method," *Y. M. C. A. Forum Bulletin*, March, 1924.

[3] WATSON, G. B.: *Experiments with Religious Education Tests*, p. 14. Association Press, New York, 1926.

The author would not deny the assertion of the previous writers that deliberation is necessary for the highest control of conduct and hence for the highest form of character. To follow the course described by Kilpatrick — (1) to know the elements involved in a situation; (2) to evaluate and weigh these elements correctly in deliberation, considering the expected outcomes of proposed conduct; and (3) to act on the basis of the thought-out solution — would indeed result in a character of high type. Carried to an extreme such a character would mean the cessation of activity because of the difficulty and time necessary to carry out the deliberations. But the question is naturally raised whether the description of character given by Kilpatrick accords with the facts of conduct. Do persons, even of the highest type of character, follow through the steps proposed by Kilpatrick? This is a matter of research and not of definition. Whether character implies conduct which follows deliberation is not known. However, one may venture to express an opinion, using the facts of mental life as they are today known. Ideo-motor conduct is a possibility. But evidence points to the fact that taking people as they are found, their ideas control only a very small fraction of their conduct. Even the most intelligent people guide their conduct by ideas only in new and unfamiliar situations which comprise only a small percentage of a day's activities. The average man probably responds a hundred times to sights, sounds, and touches to every one time that he responds to an idea during the course of the day's experiences. Again, many of the ideas to which even the most intelligent man responds are habitual thoughts — the new responses to ideas are rare indeed among all responses to ideas. For the average man perhaps it is safe to say that for every hundred responses to an idea, one is a new response to an idea. In the chapter on reasoning it is pointed out that only rarely do we reason out from knowledge of anatomy and physiology a course of action to follow regarding our health and safety. Such deductions come only at intervals from the greatest minds in the medical profession and they are passed on and used, but not reinvented, as devices by the people. Only an Edison could invent the incandescent light; any child can turn on the switch which sends the current through the lamp. The human race has been centuries evolving a set of *mores* which permit human beings to live together with a sort of security and freedom; and it is only too easy to criticize these *mores*, even though they are the inductions of the best minds of all the ages. It is difficult to believe that we shall be successful in teaching children today to deliberate on their conduct successfully. The writer's opinion is that the character described by Kilpatrick is possible, but extremely improbable. The best that can be done is to teach pupils the habit of responding to their own ideas (probably a habit that can be generalized) and then to put them in possession of the best solutions to all the problems of conduct that are available. To attempt more than this would probably be unavailing.

Character and discrimination of situations. — A very real way in which the reasoning powers can aid in character is in recognizing those intangible aspects of situations which are the basis of confacts. For example, what is honesty in business today in all the intricate relationships involving corporations, taxation, advertising, etc.? This use of the higher faculties in making comparisons and discriminations, in recognizing the elements in a somewhat unfamiliar situation, is extremely important for character. Anyone endeavoring to train character can do no better on the mental side, than to give practice in making these recognitions, comparisons, and discriminations

Character and native factors. — Finally, is there a basis for character in instinct, strength of the fundamental drives, ability to inhibit, etc.? These are matters for research. No authoritative answer can be given today as to the place of instinct in conduct. Psychological thought has had several shifts back and forth in this issue. It is probably assured that instinct does not work in the wholesale manner once supposed. Surely character as a sum of habits is learned. Undoubtedly there are individual differences in strength of drive which may account in part for differences in the way in which different individuals will react in the same environment, such as, within a family. It is highly probable that these differences are in part structural and organic, that is, due to differences in the structure and functioning of the organs which are the root of these drives. But in part they are also probably habitual. Amount of sleep a day, in this sense, is said to be habitual. Individuals also differ with respect to their powers of resistance. Here again this may be in part innate and in part acquired. Observation leads one to believe that these differences in resistance are largely acquired. For instance, the person who has learned to respond to his own thoughts "I won't," or "I mustn't," or "I shouldn't," has a mechanism for inhibition quite apart from any native tendency. On the other hand it may be easier for some to learn these ideo-motor responses than for others.

Summary. — There is need for a definition of personality and character inasmuch as these are growing to be prime objectives in education. Definitions of personality and character have been culled from psychological writings. Personality may be taken as the organism working together in all its various phases. Character is taken in its most general meaning as synonymous with conduct. To mean by character inner attitude or disposition is to unnecessarily restrict its significance and makes character impervious to education. In its narrower aspects character refers to the confacts. One feature of character is the uniformity of response; another is the perfection of the confacts. Character is often taken as the response to the abstract and far away in space and time and thereby becomes related to purpose. Character is often contrasted to manners. The distinction is made between inner and outer control whereas a more significant distinction may be made between partial and universal response.

Character and manners are synonymous insofar as the petty and conventional in manners are disregarded. Character is often said to be dependent on deliberation but undoubtedly too much should not be expected in applying personal intelligence to problems of conduct. Comparison and discrimination of situations may be helpful in forming confacts and hence in building character. How much character depends on native factors of instinct, strength of drive, inhibitions, etc. awaits the result of research.

CHAPTER XVI

CURRICULUM CONSTRUCTION IN CONDUCT

Activity survey — Inadequacies of an activity survey — Survey of conduct of persons who have made the best adjustment — Survey of outcomes in contrasting groups differing in conduct — Experimentation — Technique of the activity survey — Determination of valid manners — Determination of valid attitudes — Child *vs.* adult standards of conduct — Summary.

All currently accepted conduct is not necessarily a valid objective for education. One would hesitate to maintain, for example, that all children should be trained in etiquette according to standards in such popular manuals as Mrs. Post's. What criteria shall be established for choosing valid objectives for conduct education? How shall valid conduct be determined?

Activity survey. — The first and most obvious method for determining valid conduct is by means of an activity or conduct survey. Without more extensive knowledge there is nothing better than to educate so as to continue present practices. The *mores* of the present day are the resultant of a trial-and-error process carried down through the ages. Variations have been tried, and those which apparently have yielded the greatest satisfaction have been retained, while the others have been discarded. This process has been a halting and stumbling one. It has been carried forward and given impetus by the great thinkers of the ages such as Moses, Socrates, and Jesus. It has received setbacks in the impulsive nature of man working under unfavorable economic conditions. The *mores* represent imperfect generalization. Ethnology has many times demonstrated the absurd origin of many a custom in some chance contiguity of events. Sumner gives examples of such false influences. "On the Nicobar Islands some natives who had just begun to make pottery died. The art was given up and never again attempted. . . . In Molembo a pestilence broke out soon after a Portuguese had died there. After that the natives took all possible measures not to allow any white man to die in the country. . . A very great number of such cases could be collected."[1] The superstitions which persist in our own civilization are the results of a form of imperfect generalization. Such superstitions, as everyone may testify for himself, are part of the mental equipment of all. Common superstitions cluster around the number 13, beginning a journey or a task on a Friday, boasting of escape from illness or accident, looking at the new moon over the left shoulder, breaking a mirror, raising an umbrella in the house, failure to pick up a pin, etc. The *mores* are a resultant of rational and irrational forces working in response to the demands of the organic urges.

The kind of reasoning which has crystallized in the *mores* is represented by the proverbs. These are innumerable, such as, "The early bird catches the worm"; "Don't cross a bridge till you come to it"; "Don't cry over spilt milk"; "A watched pot never boils"; "The proof of the pudding is in the eating." These are, in the main, imperfect generalizations.

If the standard of conduct education in any community could be the average or typical conduct of that community, the result would, to a great degree, be satisfactory. The *status quo* would be retained. The continuance of the present *mores* would be ensured. Unsatisfactory as this might be to most persons who have a strong set toward education for progress, at least such a conduct curriculum would be better than none at all. For the present *mores* represent passable living conditions. A survey of typical conduct in the community would endeavor to determine present modes of response in a wide variety of situations and would present a curriculum consisting of modal practices.

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[1] Sumner, W. G.: *Folkways*, pp. 24, 25. Ginn and Company, 1906.

Inadequacies of an activity survey. — Several difficulties at once arise in connection with such a survey. Each social group would present varieties in practice. Not only are the customs of different nations different, but sections within a country show variations. In our own country there are different *mores* in city and country; in suburban residential communities, and in crowded tenement districts; in commercial and in professional circles; in wealthy and in poor groups; in school and in the home. A question which arises is: should the school recognize these differences in practice and arrange its curriculum so as to perpetuate the differences, or should a uniform curriculum be determined by surveying a wider sample and taking modal practice for the whole sample? This question cannot be answered without considering other factors. First, it must be decided what features of conduct shall be entirely ignored by formal education. It may be that some of the wide variations are symptoms that the issue is of little consequence and hence may be disregarded. Secondly, this wide survey which would uncover differences in practice, would be uncritical. Of course one can do better than accept uncritically the residue of racial experience as crystallized in present practice. A general survey to determine present practice is only a beginning, and with the later application of critical methods, questions arising as to what should be done with differences in practice could be resolved satisfactorily.

The suggestion that current modal practice be the basis for the curriculum in conduct is revolting to some persons. These feel that if the school is an agency of progress, its curriculum should provide an education which would result in progress. We want our children to live better than we ourselves have lived. But what does better conduct mean? How is one type of conduct better than another type? Conduct usually is a means to an end. A good example is the habits which influence health. Health is one of the things for which men strive. Health underlies efficiency and happiness in all of life's activities and pursuits.

Consequently those activities which influence or are correlated with health should be considered critically with reference to the curriculum. A survey of activities would show those modal activities which result in average health or physical efficiency. If we want to teach those habits relating to health which lead to better than average health, then this general survey of health habits is not satisfactory.

Methods for determining best health habits. — There are three methods which will tell us which habits lead to better than average health: One is to survey the health habits of healthy persons. The argument is that if there are some habits of health which influence or are correlated with health, then they ought to be found to be the habits of persons having superior health or physical efficiency. To the writer's knowledge, no such survey has been made, partly because the medical profession cannot tell with accuracy differences between persons in health and physical efficiency.

A second method, using the survey, is to study the health and physical efficiency of two groups which differ in some conduct habit. For instance, what is the difference in the health of persons who exercise daily in the open air and persons who do not? Or what is the difference in health and physical efficiency between persons who have habits of regular bowel evacuation and those who do not?

A third method, which has been used, is experimentation. Dietary habits may be studied experimentally in rats. Two rats may be fed varying diets, one being deficient in some vitamin or mineral salt, and differences in growth, weight, size, quality of coat, activity, and other factors may be noticed. These differences, being caused by differences in metabolism, fuel value, etc., are general, and by analogy dietary rules may be drawn up for human beings.

Instead of health or physical efficiency, length of life may be the criterion. Raymond Pearl, for instance, has found the correlation of general factors with length of life. Insurance companies are constantly extending their knowledge of factors which cause early death.

Methods for determining best study habits. — Or take an entirely different problem. In school and in many professions we are interested in habits of study; surveys have been made of the study habits of large groups of school children. These examples of modal performance set up tentative norms. But one would not consider them satisfactory as standards. The same three methods described above for health may be used here in determining the habits of efficient study. One might survey the activities of good students and determine the habits of work. Deich and Jones have done this for a number of distinguished pupils in Iowa high schools.[1] The second method is to note the effect of certain habits on school efficiency. The writer[2] has attempted this by a close observation of the habits and methods of good students and poor students. Length of time spent daily on study has been correlated with school marks and the correlation is negative. That is, time spent in study does not necessarily yield good results. A third method is that of experimentation. Good[3] has studied the relative efficiency of one reading against two readings of a passage, and Germane has compared experimentally the value of summarizing a passage which has been read as against a rereading of the passage, finding the former to be superior.[4] These three methods yield a knowledge of conduct resulting in study which is superior to the average.

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[1] DEICH, C. and JONES, E. E.: "A Study of Distinguished High School Pupils in Iowa," *U. S. Bureau of Education*, 1923, Bulletin No. 46.

[2] SYMONDS, P. M.: "Study Habits of High School Pupils," *Teachers College Record*, XXVII: 713–724, April, 1926.

[3] GOOD, C. V.: "An Experimental Study of the Merits of Extensive and Intensive Reading in the Social Sciences." Doctor's Thesis, University of Chicago, 1925.

[4] GERMANE, C. E.: "Outlining and Summary Compared with Re-reading as Methods of Studying." Report of the Society's Committee on Silent Reading, pp. 103–112, *Twentieth Yearbook of the National Society for the Study of Education*, Part II, Bloomington, Ill. Public School Publishing Company, 1921.

The first of these methods is generally applicable although often difficult to administer. In general it consists of surveying the activities of successful persons in any activity or any phase of life. This is the method employed by certain magazines, such as the *American Magazine* and *Success*, in giving interviews or brief biographies of successful business men or women. A tabulation of the habits employed by these successful men in the conduct of the affairs of life should reveal the habits which make for success. Those habits would stand out more clearly if an exact number of unsuccessful men and women of equal ability could be questioned and their life habits described. In such an inventory one should very carefully exclude what these same men say they think the cause of their success is. Again the habits of men and women who have enjoyed a successful and happy family life should be surveyed. The habits of thought and action of married people in relation to personal affairs, the care of personal belongings and common property, the management of money, and in their relations with each other and with other people should be surveyed and compared with the habits of an equal number of persons who have an unsuccessful and unhappy family life. The results of such a survey should yield information concerning the habits of life which make for success in the sex relations.

Technique of the activity survey. — In making a survey of this kind on successful persons, one must be careful to observe certain details. In the first place, care should be used not to obtain the evidence by asking a person to describe his habits unless those habits are extremely objective and are such that they may be observed by the individual reporting them without difficulty. It would be quite unfair to ask a man to report on how frequently he filled his fountain pen, but it would be fair to ask whether he habitually used a fountain pen. It might not be fair to ask a lady how much money in the form of currency she usually has in the house, but it would be fair to ask how she carried her money when shopping or traveling. Secondly, the person conducting the survey ought on the one hand to have an open mind as to what he shall find, and on the other hand be sure that he knows the different types of habits that he should seek. One doing survey work of this kind should be trained to know what to look for in the way of habits. Habits are extremely elusive and subtle. The confacts in particular are difficult to detect. Probably such a survey should be preceded by a "finding" investigation in which all possible varieties and types of habits are located and made up into an inventory list. This inventory list could be used as a check list in the survey itself.

Snedden has proposed the "case-group" method of surveying social customs and demands. His theory is that groups (economic, social, intelligence, occupational, religious, etc.) differ in their customs and hence in their educational needs. What one group has another group lacks. His proposal is that one survey the needs or lacks of a group as a basis for determining the objectives of education. This proposal emphasizes the different needs of various groups, but it neglects the fact that, whatever the group in which an individual may be placed, there are certain common aims or incentives for the members of all groups. One can determine the optimum conditions for attaining these aims by a survey of the activities of individuals most successful in doing so, rather than by surveying indiscriminately the members of separate groups. This answers one of the queries raised above. Insofar as persons are motivated by common purposes and desires, the curriculum may be uniform, provided the means of attaining those desires are uniform. Where conditions are different, different curriculum proposals may be made insofar as they affect the results. In general, the same curriculum in conduct will apply equally to city and country, to rich districts and poor districts. But if economic conditions are different in city and country so that different habits are necessary for happy home life or success in business, then these differences should be noted in the curriculum. If the competition in mercantile life requires a form of honesty different from that of farmers, then this should be noted in formulating the objectives in education.

The second method, that of following up a single habit or confact, may also be used generally in determining the conduct that leads to progress. But this method is still more difficult to carry out successfully than the first method.

The third method, experimentation, is next to impossible unless the experimental situation is already set up. It is practically futile to experiment in a fundamental way on human institutions or *mores*. Is it one's desire to determine the conditions for success in the business world? Then one must start with certain conditions that cannot be changed — the capitalistic system, the system of competition and of coöperation, a certain form of government. Is it our desire to determine the conditions for successful sex life? Then one must start with the monogamic marriage as the basis. One may determine variation within these institutions and the best way of ordering one's affairs so as to live most successfully and happily, but the institution itself must not be tampered with. The biggest problems for conduct education are connected with the validity of the institutions themselves. Is our present system of government the best? Is our present system of industry the best? Is our present system of marriage the best? These fundamental questions cannot even be discussed in school, to say nothing of experimenting with them.

All that can be done in studying the validity of the institutions themselves is to note variation in practice. The Russian revolution was hailed by many as an experiment which would determine for us the validity of many of our fundamental *mores*. One does not have to wait for a revolution, however, to demonstrate such a variation in practice. Ethnology can furnish illustrations of almost every conceivable variation in practice. These illustrations do not constitute true experiments, however, as the law of the single variable is not enforced. There cannot be a true experiment when not only the *mores* in which one is interested vary, but several other *mores* also vary in undescribed ways. In the field of human affairs many *stable* forms of human organization can be pointed to, when a change in any single institution throws the whole organization out of equilibrium. Missionaries have oftentimes gone to a savage tribe whose *mores* function in a beautifully organized manner, and demoralized the whole society by trying to change one or two of the institutions. Before such variations in practice can constitute experiments the variables must be controlled so that the effect of changing a single variable at a time may be studied.

A fourth method for determining certain conduct objectives is that of expert opinion, a very obvious method. Our general thesis is that although modal practice is a good beginning, there are undoubtedly many improvements over modal practice which would result in greater social happiness. Where the economic or practical result of some human activity has been the subject of special study by some individual, that individual is in a position to make some recommendation which possesses undisputed validity.

During the war the industries of our country were put under the direction of a highly centralized board. In the fall of 1918, it was evident that gasoline was being consumed at home at a rate which would endanger the supplies necessary for the prosecution of the war in France. Accordingly, an executive request was published that no automobiles be driven on certain Sundays except where absolutely necessary, as in the cases of physicians and of the police and fire departments. The request was very generally obeyed, illustrating well the integrating force of public opinion.

Expert advice with regard to natural resources is not to be had only in times of war, however, but may be had today. In every field of human affairs — taxation, traffic control, tariff, or what not — there are experts whose experience enables them to formulate rules of conduct that will help humanity avoid the costly mistakes of trial and error. These experts could give sound advice concerning obvious improvements. One must depend on the advice of experts for a far-sighted policy. The trial-and-error method is notoriously myopic. Only as we listen to experts can we profit by the combination of accumulated human experience and the application of reason.

Determination of valid manners. — When we come to that conduct which is called manners, we become less sure of our ground. For much of manners there seems to be little justification except that of tradition. Many manners are vestigial — customs which have outlived their usefulness or function. On the one hand, there is perhaps a value in conformity in manners, even though the logic for a particular act has disappeared. Manners may be described as the lubricant of the social machine. They tend to remove the friction that living together entails. Acts of courtesy round off the rough edges of human relationships. The effect of manners is largely lost unless there is conformity. On the other hand, the restrictions of convention produce a strain on living which sometimes reaches a fatal conclusion. Those who do not conform are made to feel queer, singular. Oftentimes there is a direct ostracism, or at least failure of social promotion, of those who do not conform to the established conventions. And yet these same conventions are often without a foundation of reason, their learning is accomplished with difficulty, and their performance produces a strain. A good example of this particular feature of conduct is spelling. Much of our English spelling has no logical defense. Its learning requires hours of patient drill on the part of the learner. Yet society with its forces of approval or ridicule enforces conformity. Sound logic would suggest the teaching of simplified spelling; considerations of "social success" require the teaching of established spelling. This general dilemma has no satisfactory solution. Probably a compromise is the only practical remedy. Where a rule of manners has no logical basis and its omission would not penalize, such a custom may easily be omitted from the curriculum. Other customs which offend the tastes and standards of society are more difficult to handle. Some years ago a group of persons, among whom was President Roosevelt, attempted to enforce the adoption of simplified spelling. At the time they aroused considerable interest in and discussion of the plan, but the weight of tradition was too strong, and when the interest finally died down it was found that practically no change had been effected. Other lesser attempts have since been made to change the spelling of some of the absurdities, but the movement has been practically impotent. One should note that it is the adult sensibilities that are offended. Children are not nearly so much shocked by what seems to be queerness in spelling as we are. It would be possible to so accustom children to simplified spelling that after the passage of several years, general changes might be effected without protest. But such a schedule requires careful planning and widespread approval.

The conclusion is that many conventions which have no backing in reason should be a part of the conduct curriculum. The satisfaction of conformity is perhaps their only justification, but this is a sufficient one. Only when such conventions actually contradict some other aim in life, such as health, personal or social efficiency, should the school step in and provide a definite counter to the prevailing social trend.

Determination of valid attitudes. — What about curriculum construction as to what one should think? American education has adopted a strange *laissez-faire* policy with regard to the curriculum of attitudes. Every teacher makes a great impression on the habitual modes of thought of her pupils, yet the curriculum is absolutely silent in most respects with regard to this important phase of education. To be sure, there is much ado about the teaching of patriotism and respect for American political institutions. Recently there has been an attempt to formulate and teach very definite attitudes toward health. But the curriculum is silent about larger social issues. The school does not question the traditional *mores*. Should the school assume responsibility for criticizing the *mores?* Since many social issues are subjects of dispute for which no definite, validly authoritative answer can be given, the school is probably wise in refusing to take a stand with regard to them. But children are being educated with regard to these social issues nevertheless — at home, in the movies, in the press, and at church. What the school could do would be to raise the questions as issues and to point out definitely the significance of the various proposed solutions. The school might quite justly discuss the bearing of proposed solutions. If anything is needed in present-day education, it is education in a critical, open-minded attitude toward the social, economic, and political issues of the day. The school should put more information in the hands of the children to combat the superstition that will surely develop with meager information. Research can tell us what the most important issues are, even though it cannot tell us what are the answers to these issues. But it will be sufficient if we educate for open-mindedness in these matters.

Child *vs.* adult standards of conduct. — Another question which arises in connection with curriculum construction is whether the standard should be for the child or the adult. Concerning this important issue the Committee of the National Society for the Study of Education in its statement, "Foundations of Curriculum-making," says, "It must be recognized that the best conceivable forms of adult behavior represent goals toward which the education of the child must proceed. But, much more vigorously than has been true in the past, it must be recognized that the steps necessary in moving toward these goals are dictated by the character of the child's interests, needs, capacities for learning, and experiences, as well as by the larger demands of society." This problem arises because we are dealing with an immature, inexperienced individual who is going to be quite a different individual in his attitudes and behavior when the education process has developed. Theoretically it ought always to be possible to plan a course of activity which shall lead from the individual in his present immature state by easy steps to a more developed state. Years ago boys and girls were dressed as miniature men and women, and as men and women they were supposed to conduct themselves. The theory of that time held that children were imperfect adults, and the concept of growth was not generally held. Adult manners were the model and standard for children. None of the spontaneity and freedom which we associate with childhood was tolerated.

Habits have no ulterior end other than helping people to achieve their *own* purposes. Such being the case the conduct habits of a child of five should be those which will enable him better to achieve his own purposes. Habits of health developed in a child of that age will keep him in the condition of vigor necessary for him to be happy. He needs to have developed in him certain habits in playing with other children, in his dealings with his father and mother. So far his conduct habits consider only the people with whom he has contact and association. But what about the habits with regard to those other people whom he some day must meet and consider? Shall he wait until that day comes?

Although experimental evidence is lacking, everything points to the persistence into adulthood of habits formed early in life. Also popular impression has it that habits are difficult to form after maturity is reached. James writes:

> It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again. If the period between twenty and thirty is the critical one in the formation of intellectual and professional habits, the period below twenty is more important still for the fixing of personal habits, such as vocalization and pronunciation, gesture, motion, and address.[1]

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[1] JAMES, W.: *Psychology*, Vol. I, pp. 121, 122. Henry Holt and Company, 1890.

This has only recently been put to the experimental test by Thorndike. Whatever the potential possibilities of changing adult habits, the fact probably is that at the present time, the ordinary man does not get the amount of motivation necessary to change them.

There are two points to be considered with regard to these adult habits. We should be very wary of forming in children habits which are not *valid*, but are only the result of our prejudices. If attending church every Sunday morning is not a valid conduct habit, valid being used in the sense of contributing to the happiness of the individual and helping him to achieve his purposes with regard also to the happiness and purposes of others, then no harm is done in not building up this habit in the growing generation. The second point is that if the habit is intensely displeasing or uninteresting to the child and does not contribute to his immediate welfare, then the formation of the habit may safely be left until later. Perhaps skillful methods of motivation may avoid this *impasse*. But on no account is education to be made a source of present misery for hypothetical future blessings. The chances are that such habits are lacking in our criteria of validity. Too strict a check on the spontaneous activities of children only too often is in the service of adult prejudices. On the other hand, we should be wary of forming habits which will have to be broken later. Everything learned in childhood should contribute to the outcomes anticipated as an adult.

Summary. — The activity survey is the most obvious method for determining the curriculum in conduct. But this would merely yield a curriculum that would perpetuate current *mores*. Likewise such an activity would be likely to result in confusion since it would uncover variations in practice. Improvements on a mere activity survey would be: (1) an activity survey of individuals who have made the best adjustment towards some end; (2) a survey of the outcomes in contrasting groups which differ in conduct; (3) experimentation. These methods differ in ease of administration, also in adequacy of results. In conducting an activity survey one should depend more on direct observation than on a person's report concerning himself. Expert opinion may also be used in curriculum construction in conduct. It is particularly difficult to plan to adjust the curriculum in manners toward progressive standards as much of the reason for manners is uniformity in social living. The curriculum as to what one should *think* must not be neglected because, whether we wish it or not, children are being taught to think something. Vital social issues need to be determined so that pupils may be taught that they *are* issues and that solutions should not be accepted without adequate information. Since conduct is in the service of purposes, a child's conduct should be such as to enable him better to achieve his purposes. But it should not be forgotten that conduct trends tend to persist and we should be wary of forming in children conduct habits that will not also be acceptable conduct when adulthood is reached.

CHAPTER XVII

CONCLUSION

Misconceptions of the nature of conduct — Conclusions as to the real nature of conduct.

Misconceptions of the nature of conduct. — The foregoing chapters have uncovered a number of misconceptions regarding the nature of conduct — misconceptions which, in one way or another, have found their way into the philosophy of education and are influencing practice. At the same time, we have tried to point out the real nature of conduct. It is the purpose of this chapter to bring together the loose strings, to expound in categorical fashion the misconceptions of conduct that are prevalent in current thinking, and to present in summary fashion a constructive statement of the nature of conduct.

1. *That the formation of conduct proceeds from the general to the particular.* — A misconception that is found throughout all education is that learning proceeds from the general to the particular. In matters of conduct, this point of view assumes that one can provide a child with such general catchwords as trustworthiness, loyalty, helpfulness, courtesy, and obedience, and that he will proceed to apply them in his conduct. All conduct codes which list traits apparently make this assumption. Observations of how these generalizations become incorporated into conduct indicate that the generalization is an end result and not the beginning of the process. In fact, it is doubtful whether the generalization ever becomes complete, because no one is aware of all the situations in which such confacts as trustworthiness, loyalty, or helpfulness apply. Conduct begins by the

formation of separate skills and habits. Ways of reacting to similar situations may achieve a degree of consistency, and are then regarded as traits or confacts. But this process of generalization is by no means necessary. It is a general rule that most of our conduct is full of inconsistencies. It is a curious anomaly that we take the end result in our own learning and try to make it the beginning in the learning of children. Although such generalized conduct as trustworthiness or courtesy is of unquestioned value, there is no reason why we should *begin* with these generalizations in education.

2. *That words may act as the cues to conduct at all times.* — A second misconception is the extraordinary belief in the power of words to control conduct. Because, at times, we are able to control the conduct of others by words, it is generally believed that one guides his own conduct by his thought. Again, common observation informs us that this is far from the truth, and that a large part of what we do is controlled by such peripheral stimuli as sights, sounds, and touches and not by our thoughts. Conduct is governed by ideas only in special circumstances, when learning has connected the idea with the act. There is nothing magically potent in ideas to produce action. To control action by ideas is an achievement to be gained. While it is agreed that it is most desirable that conduct should be under the control of our thoughts on occasion, this control must be the result of learning. Individuals differ in the degree to which they have formed ideo-motor bonds, and it is never safe to assume that such bonds are present to function in conduct control. Much of school instruction is based on the assumption that one may teach pupils what they hould do, and that such teaching influences conduct. Learning rom books is the schoolroom method. But what we learn as deas will affect what we do only when previous bonds connecting nowing and doing have been formed.

3. *That reasoning about conduct necessarily influences.* — That easoning about conduct necessarily influences conduct is a

misconception which is almost a corrollary of the preceding one. A favorite device in character education is the discussion in which motives, causes, and effects of our acts are analyzed and compared. Parents sometimes believe that they should "reason" with their children and show them why they are not permitted to do this and why they must do that. Now it is not argued that this method is not effective on occasion, but it is emphasized that comprehending the significance of one's acts is not sufficient to influence him. Unless ideo-motor bonds are available, there will be no influence on conduct, and reasoning must harmonize with other reaction tendencies that are operative. To explain certain table manners or certain acts of courtesy on the grounds of expediency, convenience, or obligation usually falls on deaf ears with young children. It is only the ethnologist who is interested in the origin of customs. The arguments that prevail with children are those that show them how to get what they want. Children are not naturally "conscientious." Conscientiousness is an achievement. Much of Sunday-school instruction is like the seed that fell by the wayside — all the conditions are not present for it to take root and grow into conduct.

4. *That children may learn to solve their conduct problems.* — The last assumption is further conditioned by the assumption that pupils may be taught to be aware of the outcomes of their conduct. That this is a misconception is evident when one considers how difficult it is to determine the outcomes of what one does. The far-reaching effects of dishonesty are by no means apparent. Many stories have been written to show how dishonesty, although it may give momentary success, leads eventually to downfall and ruin. But the postponment of this punishment is frequently extended. "Honesty is the best policy" is not a maxim that was first broached in a discussion group of adolescents — it is the product of eons of racial experience. Most reasoning about conduct assumes the form of an appropriation of maxims and generalizations and their application

under guidance. Rationalization is such a powerful force that reason may be used to justify both sides of almost every conduct issue. That it is extremely desirable for children to be taught how to determine the outcomes of their conduct and thus to evaluate it, is admitted. But the difficulty of this form of reasoning is so great and so much assistance must be given, that in the end it is usually a matter of appropriating solutions proposed by others.

5. *That conduct is the result of inner attitude or disposition.* — The assumption that conduct proceeds from some inner attitude or disposition is widely held. Considerable space has been devoted in this book to demonstrating that this conception misconceives the nature of behavior. Readiness or set is merely a concept that describes an inner state which is the result of past experience and is subsumed under habit. To say that we have certain readinesses means that in the future we shall be sensitive to and respond to certain stimuli in the manner that our previous learning directs us. It is fortunate that conduct does not issue from within, impervious to outer control, for then education would be impotent. The education that believes conduct is controlled from within is reduced to sentimentalism — a cajoling and wheedling of the child to accept desirable conduct. This is the theory that believes that conduct can be instantaneously revolutionized by a change of inner disposition or by conversion. This is contrary to the laws of learning and is a theory that has no counterpart in experience. Those cases described in evangelical literature where conduct makes sudden and remarkable shifts can best be explained by the formation or breaking down of reactions controlled by a single stimulus, as, for example, reactions controlled by the "I will not" stimulus.

6. *That conduct can be formed without reference to previous habits.* — An assumption of a different order is that conduct can be formed without reference to motive. Too often material is included in the school curriculum with no thought as to how

the learning is to be related to the interests of the children. As was explained, purpose is only a name given to those ideo-motor reactions which are made where the stimulus is an idea referring to the distant in place or time. Now all learning is a form of grafting. New reactions are grafted on old reactions by substituting stimuli. In forming any conduct, one should always ask, "What am I grafting this on?" For unless one is attaching the new act to one that is already present, nothing new will result.

7. *That conduct is the expression of traits.* — A widespread misconception of conduct is that it is an expression of traits. It is assumed that everyone's personality is made up of traits which are characteristics of the personality. These traits cause one to act in certain defined ways. For instance, it may be said that a man is honest. This honesty, a characteristic residing within him, will cause the man to act honestly in all situations. We trust the honest man in any and every situation. Banks are looking for honest tellers; Diogenes with his lantern searched for the honest man. It has been found that no one acts perfectly consistently with regard to a trait as would be the case if conduct was an expression of inner traits. All evidence points in the direction that *traits are only a name for the degree of consistency of our behavior.* Banks need not know whether or not a man is honest — they need to know whether or not he will be an honest teller.

8. *That there is a short cut to conduct formation.* — A common misconception regarding conduct is that it may be changed in a twinkling if the right forces act. Very frequently in religion it is expected that by a single act of conversion, darkness may be turned into light and all one's conduct may be altered or reversed. This quite flies in the face of facts as they may be seen by observation. Indeed, the testimony of parents and teachers is that conduct formation is often a long and protracted process. The forces molding conduct give it many hammer blows before it becomes consistent and true. Why, therefore, should we have

the delusion that one may radically alter his whole conduct trend in a moment? As mentioned above, whatever truth lies in this belief must be due to those reactions controlled by a single stimulus, perhaps a word or an association. More often the only change is in the person's own inner thoughts. As he comes out of his experience, all life seems to partake of new significance. The new relationship touches everything. But the fundamental conduct trends are the same. The Scrooge who was purged by the ghosts may have bought the largest turkey that the markets held for Bob Cratchit, and may have slapped him on the back the next morning with a promise of an increase in pay, but one may be pessimistic enough to believe that within a week he was again begrudging his clerk enough coal to keep his office warm. Dicken's *Christmas Carol* makes a pleasant story to read but is hardly a safe psychological guide for parent or teacher.

9. *That conduct is controlled by the emotions or feelings.* — Another erroneous conception is that feelings or emotions somehow control conduct. It is commonly believed that some persons are governed by their intellect and do only those things that good sense tells them is the right or proper thing to do, while others are impelled by their emotions and follow where their heart directs them. Evidence adduced for this point of view is the strong emotional effects that accompany many of our acts. From some acts we recoil with a shuddering, with a horror, with a revulsion that is distinctly different from a colorless act. On other occasions, we act with a glow, a warmth, and an enthusiasm that is distinctly emotional. A thesis of this book is that these affective states are mere accompaniments of our acts, making them more urgent and impulsive, but hardly guiding them. Conduct control comes from the situation in which we are, coupled with our inner drives. That such conduct happens to be emotional is a mere accompanying phenomenon. The same stimulus that determines *what* we shall do also determines whether we shall do it with emotion and hence more forcefully.

10. *That children should be educated to adult standards of conduct.* — Another instance of jumping to the end result desired at the beginning of training is seen in the attempt to force adult conduct standards on children. This is particularly noticeable in the matter of certain of the inhibitions. Children are naturally used to free and untrammeled expression. They want to skip and run, shout and sing. They are not ready to settle down to sedate ways. This is partly physiological but may also be due to the fact that their interests have not developed to the point where regularity and control have their full importance. Cleanliness is an example. Children are not born with habits of cleanliness. Cleanliness is an achievement to be gained. Too high standards of cleanliness may make life needlessly miserable for a youngster — health should be the criterion.

Training in conduct should be planned so that satisfactory adult adjustments will result. We do not know in every case which elements of conduct are the root of desirable adult conduct. Some conduct, annoying and undesirable in children, is only the preparatory form of habits later desirable. A baby's meaningless prattle is the foundation of later speech. At the age of eight to twelve, boys will spend hours with their toy soldiers planning battles and plotting ambuscades. These warlike activities do not necessarily lead to a race of soldiers, but they may be the foundation of later habits of ambition, aggressiveness, and courage. Such habits as willingness to face the consequences of our deeds, telling the truth when it is not to our interest to do so, saying the thing that will flatter the other person, unobtrusively are formed, for better, for worse, in early life. It is the task of science to determine which habits and activities in early life are of consequence and which are only superficially important. We tend to interpret activities in terms of their adult meaning and not in terms of their genetic significance. A natural history of conduct is needed so that the embryo-desirable habits of adults may be recognized in the sometimes annoying activities of children.

Conclusions as to the real nature of conduct. — What is conduct? After this recital of what conduct is *not*, a positive statement of what conduct *is* should be given.

1. *Conduct comprises habits and skills.* — *Conduct is the habits and skills with which we meet life's situations.* The mind has a tendency to group and to ascribe results to compact, unitary forces. But in the case of conduct we should posit nothing more than the cumulation of separate modes of response. For education, this reduces conduct training to habit formation. It is unfortunate that for most parents and teachers conduct education is a matter of remediation. Conduct is not given consideration until it annoys. So most parents raise the question, "How can I change conduct?" rather than, "How can I form conduct?" Truth telling is not reckoned with until the child tells a lie; obedience is not noticed until the child disobeys; and honesty is not recognized until the child is dishonest. It is a thesis of this book that conduct must be planned far in advance. One must not wait until it becomes a problem. Genetic psychology has yet to trace for us the natural history of conduct development. But the parent needs to have listed the course of development of the habits of conduct so that he may plan for them before they arise as problems. It is easier to go about systematically arranging for the proper and orderly development of habits than to wait until the wrong habits have been formed and then to try to change them.

Every habit must have its proper stimulus or cue. Take as an example, closing a screen door. The little child bent on some errand rushes out leaving the door to slam shut. Already the habit of allowing the door to slam has had one recital, and a habit is on its way to formation. The mother scolds the child and warns him not to let the door slam again. Note the belief in the magical potency of words. But repeat the same situation: the child within doors starting to go out, and every element in the situation disposes him to make the same response of letting the door slam, unless perchance he remembers his mother's words on the previous occasion. There is nothing in the situation to remind him of what his mother said until after the door has slammed, because that is when and where all the associations with the warning have been formed. To be effective the mother must give her warning just before the child goes out. Only then is there a chance that the words will be associated with the manner of closing the door. And if there is a chance that the mother will not be around the next dozen times that the child goes through the door, it is better to have a sign put up that will be seen before the door is closed, in order to serve as a reminder. By such means the association will become established, not only between the mother's words and closing the door or the sign and closing the door, but between other elements in the situation, such as the door itself and closing it. Thus, eventually the words or the sign may be discarded.

This long exposition of a learning situation is given to show that conduct must be anticipated if it is to be controlled and guided. An *ex post facto* method of conduct development is sure to result in disappointment. Therefore conduct education will only be a success if planned beforehand. We must know before they are practised, which habits we want formed, if we are to guide conduct wisely.

This law that one must know beforehand, the habits and skills of desirable conduct, applies with full force to the problem of school discipline. It may sound presumptous to say that school discipline must be anticipated in order to be avoided. Naturally many of the problems of school discipline that arise from home and playground situations can never be avoided. But the most successful school discipline comes from knowing in the first place of what good school discipline consists, and in the second place what situations and arrangements are most likely to result in this type of discipline, and then arranging the situation beforehand that will bring about the results desired. We hear much today about social control, because it has been discovered that an important factor in successful school discipline is the social organization of the school. One must not wait until problems of school discipline arise — they must be anticipated and the situation so arranged that they will not occur.

2. *Under certain circumstances, conduct may be generalized and consolidated.* — Conduct may be generalized and consolidated by responding to the likenesses and differences in the situation, particularly through the medium of language. Inasmuch as intelligence is capable of carrying through the generalizations necessary and insofar as the confacts to be formed serve purposes, conduct may be generalized. This generalization of conduct does not extend as far as most people suppose, with the result that conduct for the large masses of people remains unorganized, a rather loose bundle of unrelated and disassociated habits. But confacts may be formed, as most of the readers of this book will testify from their own experience. Such generalizations develop through the usual procedures of directing the attention, of varying the concomitants, of using contrasts, and, where concepts serve as cues, of forming ideo-motor bonds. At the present time, generalized conduct or confacts develop in children without much planning or forethought on the part of teachers and parents. By using well-known psychological principles it should be possible to plan for and develop these confacts much more extensively than is now the case.

3. *New conduct must be in the service of habits already formed.* — A habit cannot be formed willy-nilly without regard to other habits. The laws of learning, whether one uses the language of the conditioned reaction or the law of effect, indicate that any habit must be formed in the service of other habits. The usual method of stating this is to say that conduct must be formed in the service of purpose. But this rule does not connote the full significance of the law, because purpose is usually considered in a narrow sense. Purpose, as was previously stated, is only a

name for certain reactions to stimuli not immediately present. Purposeful acts usually need a series of preparatory acts before the final goal is reached. In general, conduct must be in the service of purpose or some other active set of habits.

This law is frequently overlooked in conduct formation. In planning conduct, it is a common error to forget that the new habit must be attached to some older habit. Parents will often attempt to establish a habit by repetition alone or by force. But habits take root slowly. The laws of learning teach us that conduct will be most rapidly learned when in the service of the most intense purpose or the strongest habit. Accordingly, in laying plans one must not only decide what habits shall be formed but to what habits they shall be attached. We may decide that a child should learn certain acts of courtesy, but we often fail to consider what interest the child has in courtesy or to what purposes or habits we shall attach these courteous acts. Such questions, however, are as important as the decision as to what habits shall be formed.

In this connection, there is a curious error commonly made that it is most desirable to appeal to intrinsic rather than to extrinsic interests or purposes. In the case of an act of courtesy an intrinsic interest would be the interest in courtesy itself and an extrinsic interest would be some extraneous reward that would follow the acquisition of the habit. We hear the same point raised in connection with school work. History teachers aver that they want their pupils to study history because of their interest in history and not because of some mark that they will receive at the end of the term or for credits toward graduation. Mathematics teachers would prefer to have their pupils genuinely interested in mathematics rather than in the praise that comes from handing in a good paper. But these wishes on the part of teachers fly in the face of facts. When Pavlov conditioned the dog's flow of saliva to the sound of the bell, the dog was not primarily interested in the bell but in the food. His interest in the bell was achieved only after the consummation of the learning. So we must not expect children to be interested in courtesy until courtesy has been learned. Interest is an achievement that parallels habits but does not precede them. One must build habits of courtesy on interests and purposes that are extraneous to the habit to be formed. In this sense the end justifies the means — it is the only way to accomplish what is desired. So it is not wrong to depend on extraneous rewards or penalties to accomplish the building up of a habit, as long as these rewards and penalties are merely propadeutic and do not become crutches.

4. *Conduct of the highest type follows deliberation.* — Conduct may be of the impulsive, emergency type or it may be delayed to follow after reasoning. It is one thing to be able to think soundly concerning matters of conduct, and another thing to be able to put one's reasoning into practice. There is nothing impulsive or urgent about the products of reasoning. Reasoning correctly about matters of conduct is difficult, but most difficult of all is the ability to be impartial and not to let the emergency of the situation or one's personal interests sway the impartiality of the conclusions. The highest type of conduct is that in which activity is postponed until all the issues in the situation have been impartially considered and evaluated and a rational decision as to the best course to be followed has been reached.

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